

MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

VOL. XL No. 9. WEEKLY. BALTIMORE, APRIL 9, 1887. \$3.00 A YEAR. SINGLE COPIES, 10 CENTS.

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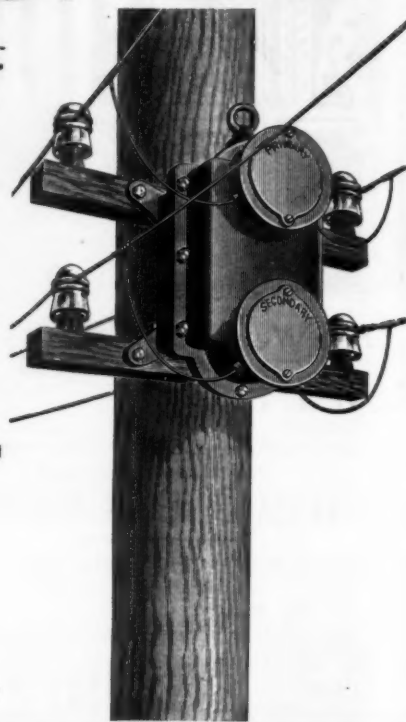
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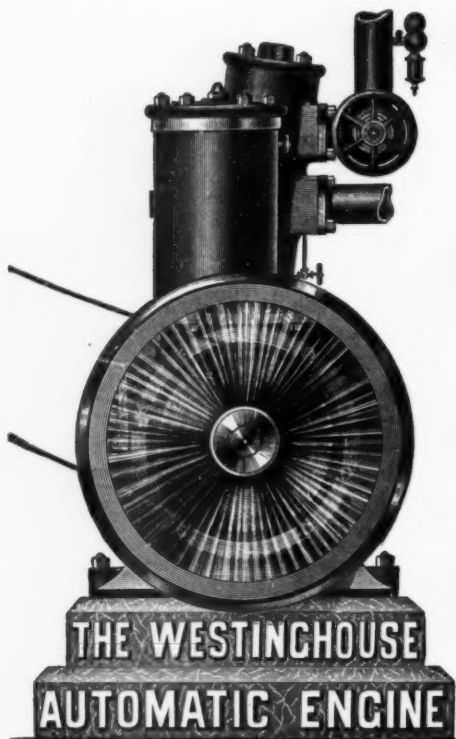
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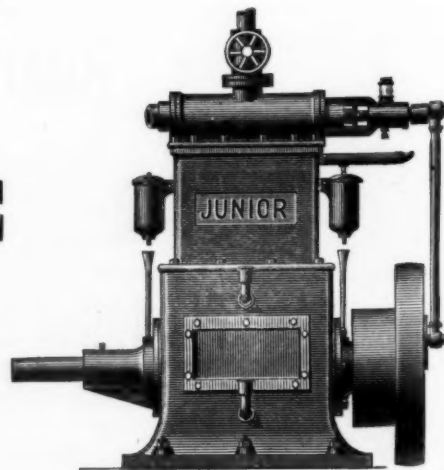
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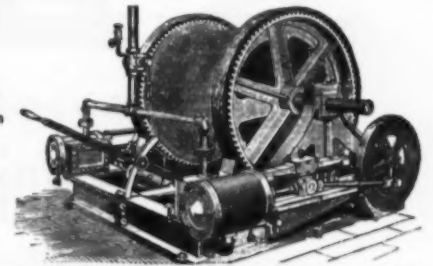
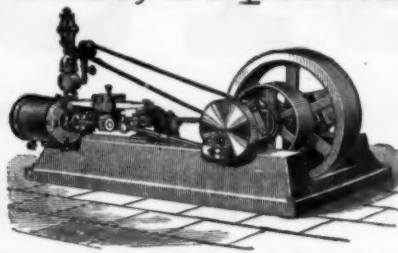
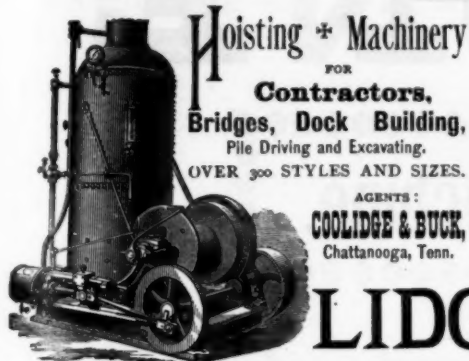
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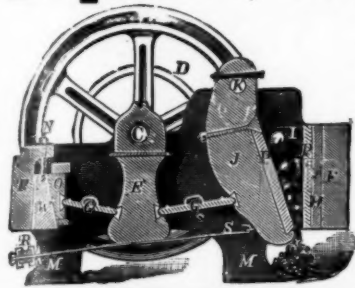
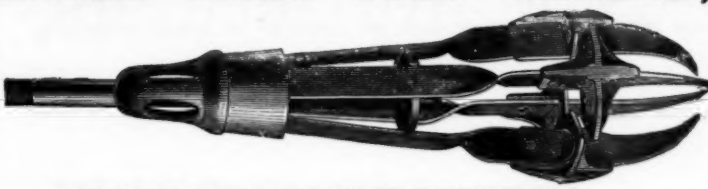
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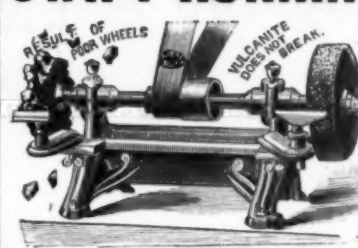
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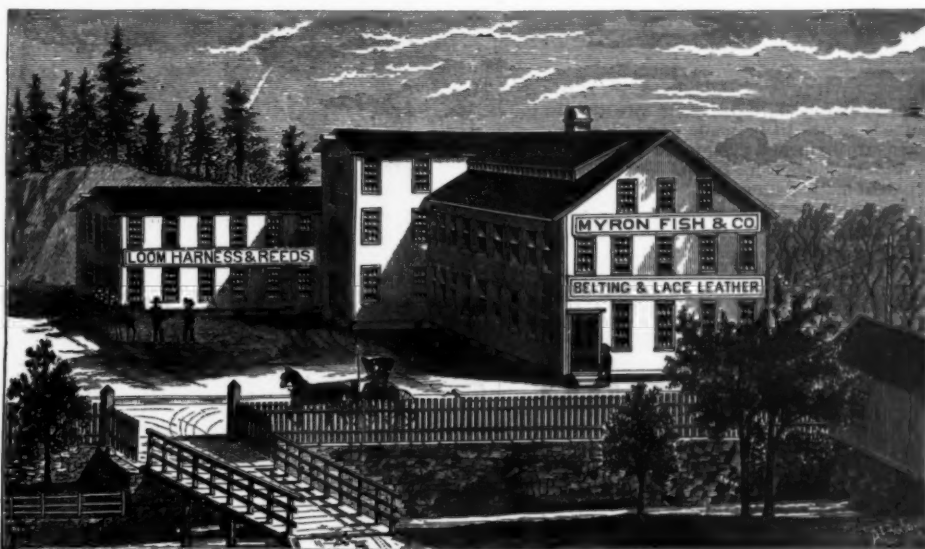
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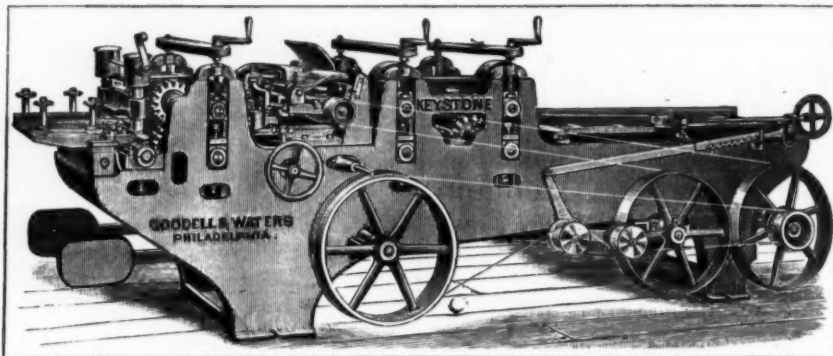
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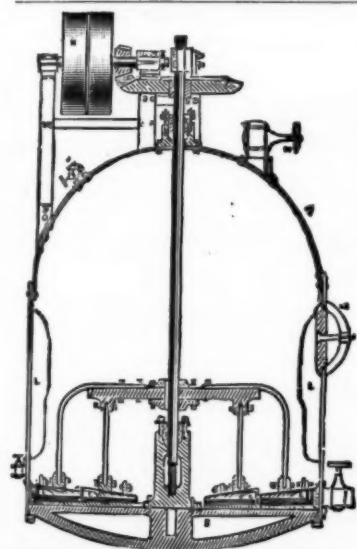
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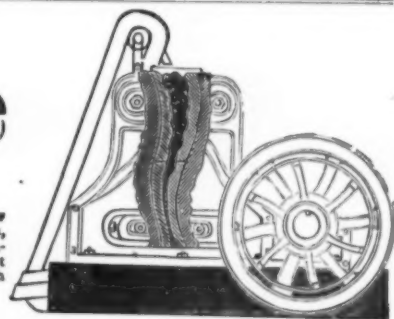
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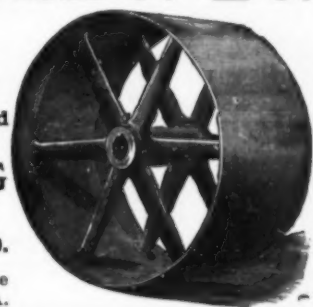
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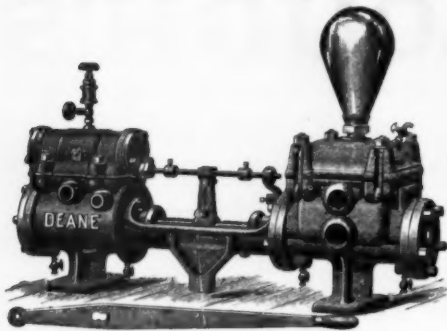
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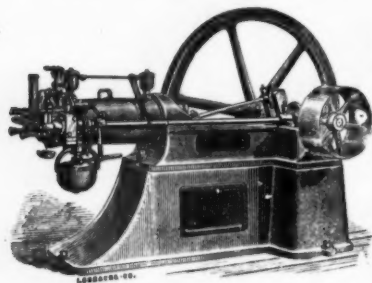
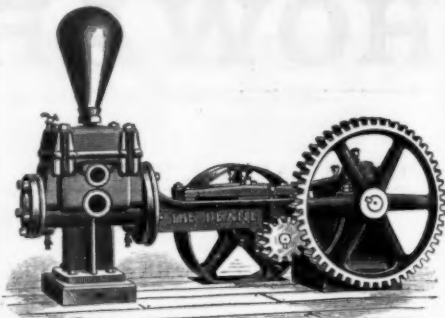
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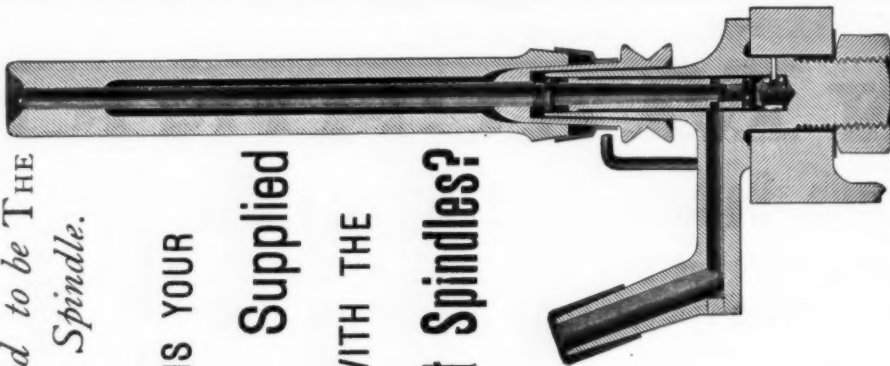
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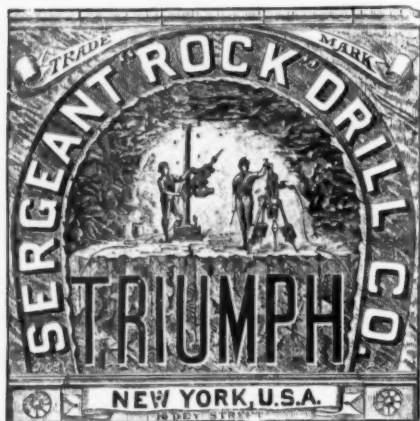
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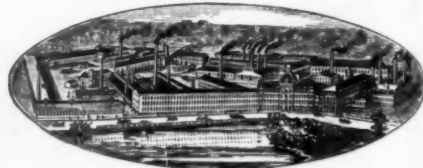
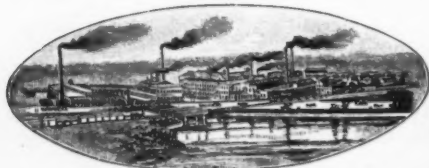
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SUBSCRIPTION \$3.00 A YEAR.

BALTIMORE, APRIL 9, 1887.

SUBSCRIBERS who do not receive the MANUFACTURERS' RECORD on time or who fail to receive it regularly will please notify us promptly. It is mailed before 3 P. M. on Thursdays, and from this they can tell as to what time it should reach them. During the last five or six months the complaints about the lateness and the non-delivery of this paper, as well as of the Journal of Commerce, also published by the Manufacturers' Record Co., have been so numerous that they have become monotonous. The trouble seems to be in the Baltimore post-office, and while we have made complaints almost without number we are anxious in the interest of our readers to keep up the complaints until there is some improvement in the mails.

Another Big Coke and Coal Enterprise.

So rapid are the industrial movements in the South, and there are so many gigantic enterprises announced every week, that there seems to be no limit to the growth of this section. One of the most important enterprises yet recorded is the purchase, as stated in our Anniston letter, of the property of the Cahaba Coal Mining Co. for \$1,000,000, and in the development of which \$1,000,000 more will be spent. This immense property will be worked largely, we imagine, in the interest of Anniston, as it has been purchased by the leading men of that town in connection with other capitalists. The output of the coal mines will be increased from 700 tons a day to 2,500 tons, and 500 coke ovens will be built for furnishing coke to the new Anniston furnaces, as well as to other furnaces. Not only for Anniston is this sale of vast importance, but to the whole of Alabama it is of vital interest. It means the rapid increase in the coke ovens of the State, and there is a pressing necessity there for an enlarged supply of coke, and it means a million dollars more spent in the development of another gigantic enterprise.

The Growth of the South Solid and Permanent.

There is no mistaking the signs of the times. The South, not a part only of it, is on the move to prosperity and to an activity in all lines of human industry that will undoubtedly surpass in magnitude the great development of the Western States. For years the tide of immigration from Europe and from the East spread over the West, peopling with a busy population eager for active work that immense region; capital poured in for the development of agricultural lands, the building of railroads, factories and all the industries that go to make up the business life of a rich and populous country. The result everybody knows. The West developed with a rapidity that was startling, but it was a solid growth and there has been no decline, and there will be none. It has permanently taken its place as one of the immensely wealthy portions of the world.

The South has now taken the place so long held by the West as the center of attraction for capital and immigration. About a year ago we quoted from a pamphlet on the opportunities of the South by Wm. L. Breyfogle, the sentence:

"The necessities of the North and the opportunities of the South were never so well calculated or so happily timed to give each section immediate and great prosperity, necessarily resulting in a cordial and thorough union of interests and feeling, as those which exist to-day. * * The North and the South must now become either allies or rivals. If the first, both sections will gain unprecedented prosperity; if the last, while the North must lose much, the South will gain something, but far less than if both sections move together. In other words, the South can grow in a way to build up the North or she can grow at the expense of the North. Nothing can prevent her growth."

These opportunities have been improved and the North and the South are vying with each other, as to which shall accomplish the greater work in the development of the South's wonderful riches. The flow of immigration is now to the South instead of to the West, and Northern capitalists have now turned their investments in the same direction. These currents of trade felt first in force in Alabama, are now rapidly spreading out and covering the whole South. Everywhere we see this. From Virginia to Texas activity is seen; money is becoming more abundant; the long-hoarded treasures are being put into circulation, new industries are being established, buildings for stores and dwellings are going up as never before, railroad construction is active and of all signs, one of the best, there is a strong advance in real estate values. Throughout the South real estate has been low and hard to sell, except in special locations, for even a small part of its intrinsic value. Vast mineral and timber properties that kept their owners "land poor," returning no profits, but costing heavily in taxes, were unsalable; farm lands

were comparatively without demand. Now there is a steadily improving market for real estate of all kinds and thousands of land owners have already realized the blessings of this, and have sold at good prices, land for which they had heretofore found no demand.

This does not mean, as some have imagined, a real estate speculative mania that will soon react with disastrous results. It means that a new order of things has come and that the South has entered upon an era of active solid and permanent growth that will make her as much greater than the West and New England in wealth, than she is greater than they in natural resources. This may seem impossible, and doubtless some of our readers will question its correctness. For years we have been proclaiming with all our might the coming of this stupendous progress that now thrills the South from end to end, but many doubted it, and five years ago we could have found but few to believe that the things we now see would ever come to pass. With an abiding faith in the great truth that we have so often stated, that the South taken as a whole is the best country in the world with the greatest possibilities of wealth, we never doubted but what the time would come when that section would be the center of the most active industrial movements of this or any other country. Facts have demonstrated the correctness of our position in the past on this point, and those who doubt the assertion that the South will exceed the West and New England in wealth, will not have very many years to wait before they will be forced to admit the truth of this prediction.

The Same Old Story.

New Year's Day, 1833, was not a joyful festival in any State of the Union, for dark clouds hung portentously low in the political sky, and even the boldest feared what might be in the future. The general anxiety was caused by the determination of South Carolina to nullify the customs laws of the United States and by the sympathy and encouragement given by free-traders elsewhere to the movement. President Jackson had issued his famous proclamation asserting the powers and duties of the general government, and Governor Hayne had replied, "warning the good people of this State (South Carolina) against the dangers and pernicious doctrine promulgated in the said proclamation of the President." The legislatures of several States then in session, the press at large and the people everywhere were discussing the questions of protection, free trade and the right of nullification with uncommon earnestness and anxiety. In reading the discussions of that day it is interesting to note that the free-traders used almost identically the arguments and even the catch phrases that are familiar to this

generation. Public meetings resolved that "the existing tariff is unpolitic, unjust and oppressive." One newspaper, the Telegraph, went so far as to say: "We have treaties with Great Britain by which her vessels have the right of entry in our ports. The right of blockade being a belligerent right, and Congress alone possessing the power to declare war, any attempt on the part of the president to prevent the free ingress and egress of British vessels will be a violation of our treaties as well as of the constitution; which violation Great Britain would resent. She would counteract it by a British fleet. It is manifest that a war originating in such causes would be popular in England, and he is blind to the condition of that country, and of the other European powers, who does not see that it is the interest of Great Britain to engage in a war with the United States, provided she can carry with her the prejudices of her own people." Doubtless, the foregoing was considered the veriest gasconade by the majority of those who read it, but certainly not by all. There were a few who knew that the writer of that paragraph had substantial reasons for his faith. Niles' Weekly Register of July 3, 1830, republished a communication to the United States Gazette (the editor of the former vouching for the high standing and integrity of its author). The letter was addressed to General Hayne, then a member of Congress, and was called out by a speech he had made. The writer while in London the preceding autumn had been asked his opinion of affairs in the United States by a friend who was one of the influential statesmen of Great Britain. He replied that "the natural resources of this great country were inexhaustible; that the tariff of 1824 had brought some of these dormant resources into use, while the revenues, arising principally from imports, had enabled the government to pay more than thirty millions of the public debt, exclusive of large advances for internal improvement; that if we enjoy peace and our own government continues to encourage the industry of the country * * * the United States will soon be the most wealthy, powerful and independent nation in the world." The friend acknowledged the truth of what had been said, but added that except for financial perplexities England "would soon put a stop to the rising greatness and prosperity of the United States." Asked how that was to be accomplished, he replied: "We would convince the people of the cotton-growing States that your tariff oppresses them, and we would offer them such protection and such commercial advantages as would induce them to rebel, and in less than five years we would produce a separation of the Union."

We have briefed this old story, published at length in the journals of 1830-33, for there is in it a lesson applicable to this period. The pro-

phency of what Great Britain would do at her earliest convenience was made in September, 1829, and published the next summer. In less than three years thereafter a public sentiment had been created that encouraged the State Convention of South Carolina to enact the ordinance of nullification. The British statesman had said in September, 1829, that it could be done within five years. The nullification act was adopted November 24, 1832, three years and two months after his prophecy was made.

History repeats itself from generation to generation. The British trader is the same now he was half a century ago. His intentions have never changed, but only his methods of accomplishment. There is no likelihood of his ever again forcing England to engage in war with the United States, nor can he ever again assist in inciting a sectional war among us. England paid too many millions for the aid and comfort she indirectly gave to the Confederacy to care to repeat that experience, and the bonds of union between the citizens of this country are now stronger than ever, and can never again be weakened. British traders, and their statesmen who carefully watch over their interests, are not easily discouraged. Their bull-dog pertinacity is proverbial. When they have determined upon anything they let no obstacle or opposition drive them from the pursuit. Having supreme confidence in the power of money, and with unlimited wealth at command, they are able to control many avenues of influence, and through various agencies to inculcate free-trade ideas.

The cry of "unjust and oppressive," raised against protection 50 years ago by British agents, has been sounding through the South for the last 8 or 10 years. Meanwhile the prediction made by the American letter-writer to his friend, the British statesman, in 1829 has come true. The tariff of 1824 brought "some of the dormant resources of the country into use, but under the protection we now have the roar of trip hammers, blast furnaces, machine shops and cotton mills is fast overcoming the hue and cry of its opponents, and our friends across the ocean will before long be compelled to try some new way of converting the people of the United States from protection to free trade.

"WE look upon the MANUFACTURERS' RECORD as the flagbearer of the South's boom, and wish you abundant success," writes Mr. L. Lanier, banker and manufacturer, of West Point, Ga.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.

Southern Industrial Growth in 1887.

WASHINGTON, D. C., April 2, 1887.

Editor *Manufacturers' Record*:

The study of your figures in your issue of the 2d inst. of Southern industrial growth affords some interesting deductions.

Comparing the first quarter of 1887 and of 1886 we find the increased number of 1887 over 1886 to be as follows in new establishments:

	1st qr. 1886.	1st qr. 1887.	Increase.
1. Mining establishments.....	28	145	114
2. Lumber mills.....	110	189	79
3. Canning factories.....	1	22	21
4. Ice factories.....	19	35	16
5. Machine shops and foundries.....	17	34	14
6. Water works.....	8	23	14
7. Iron furnaces.....	4	17	13
8. Flour mills.....	18	30	12
9. Cotton mill companies.....	3	15	12
10. Furniture factories.....	7	15	8
11. Gas works.....	9	15	6
12. Electric light works.....	12	17	5
13. Carriage and wagon factories.....	12	12	0
14. Agricultural implement factories.....	4	4	0

Coupling the iron concerns together we have 21 in the 1st quarter of 1886, against 48 iron shops and furnaces in the 1st quarter of 1887, or 27 more. To these should be added 19 miscellaneous iron establishments—a total of 75.

The above table shows that mining, lumber and iron manufacture lead, using our native resources; while next comes the utilization of our surplus fruit in canning establishments. Mining our ores is the first field of enterprise, and next working up our native timber. The cotton manufacture appears subsidiary to the iron development, 15 cotton mills and nine cotton compresses, or 24 cotton enterprises, standing against 75 iron enterprises.

The increase in gas works, water works and ice factories, all luxuries of a wealthier regime and accompaniments of prosperity and progress, tell the tale of development.

One most significant and agreeable feature of the industrial expansion is the remarkable diversity of investment. Of the 926 new enterprises there are 217 small miscellaneous concerns, or nearly one-fourth. This shows the tendency to leave the beaten track and multiply manufactures.

Take Alabama, that leads in new matters, showing nearly 20 millions of dollars in new industries out of the 85 millions, and we find 166 fresh enterprises, including, besides iron and coal, such matters as manufacture of brick, shoes, bottling, terra cotta, asphalt, paint, roofing, trunks, pottery, oil, handles, rice, bark extract, canning, buckets, brooms, dry dock, gins, &c.

Georgia shows up well in her diversity of manufacture. She had 100 new enterprises in the first three months of 1887, embracing medicines, soap, shirts, axles, marble cutting, piling, crates, baskets, refrigerators, vinegar, candy, buckets, canning, matches, pottery, spring beds, brooms, slate, variety works, spokes, toy wagons, furniture, crackers, bobbins and shuttles, bottling, &c.

The editor of the MANUFACTURERS' RECORD deserves thanks for his valuable work in presenting this chronicle of Southern expansion. It has been an herculean task well performed, and marked by striking care, industry and accuracy. I. W. AVERY.

A Great Coal and Coke Enterprise.

[Special correspondence MANUFACTURERS' RECORD.]

ANNISTON, ALA., April 2, 1887.

One of the most important transactions that will affect not only the present and future industries of Anniston, but of the State at large, has just been perfected.

The great property of the Cahaba Coal Mining Co., with its railroad, machinery and mines, has been purchased, and also 15,000 acres of additional adjoining coal and iron lands known as their property.

The whole is the very best coal property in the State of Alabama, and contains many workable veins of coal. The best vein is six feet in thickness, free from sulphur or slate, and is the best coking coal in Ala-

bama. The mines are now turning out 700 tons per day. The railroad will be extended, new mines opened and the output increased to 2,500 tons per day.

Five hundred new coke ovens will be built to furnish Anniston's new furnaces with coke.

Over a million dollars was paid for the property. One million more will be expended in providing means of transportation, opening new shafts on the veins of coal and building coke ovens.

The Messrs. Aldrich, the experienced pioneer coal operators of Alabama, with Mr. Gurnee, a millionaire banker, Mr. Alfred Tyler and Mr. Saml. Noble are the purchasers. Mr. Aldrich was in Anniston during the week conferring with his associates, and has gone to the mines to inaugurate the great undertaking the owners will complete the present year. The whole arrangements are on a scale great and large enough to insure Anniston or Alabama against any coal or coke famine.

The negotiations that transfer this vast property have been quietly going on for two months past, and were perfected by the purchase of the stocks and bonds of the company in the hands of different parties in Europe and the United States.

The coking qualities of this coal have been thoroughly tested and proved to be very superior. Specimens of the coke are on exhibition in the office of the Woodstock Iron Co. in this city. The quality of the ore there is rich and the quantity boundless. It will be largely used in the furnaces here for mixing with the ores of this section.

W. D. SNOW.

Interesting Facts from North Carolina.

[Special correspondence MANUFACTURERS' RECORD.]

FAYETTEVILLE, N. C., April 2, 1887.

Whoever would know why North Carolina is the most conservative State of the Union should come to it and spend whatever time may be required in the study of its history, its civilization and its population of this generation. I use the word conservative in its best sense, for in no other State is there the same steady progress, regulated by the same conscientious adherence to ancient ideas and usages. No community in this State advances a single step until it has ascertained that it can do so without violating time-honored precedents. It is not in any instance the ancient act, but rather the principle on which that act was based, that makes the precedent. When the average North Carolinian is satisfied that he is following the prolongation of the path blazed by his colonial ancestors and their successors he will keep on and on, for he is sure that he is right and that what he is engaged in will be for the best interests of his family, his community and the Commonwealth. Nor is this conservative citizen at all out of the way in his policy. In North Carolina in colonial and revolutionary days the fundamental principles of American liberty and of national unity were more fully ascertained and formulated than in any other of the thirteen original States. Whether the Mecklenberg declaration is a historic fact or an ambitious myth is for students of history to determine, but there are recorded in old-style clerkly hands on the venerable parish registers of Edenton, Greenville and other churches in the eastern counties such minutes of the patriotic action taken by the vestries of what were then American branches of the established church of England as to put it beyond doubt that the majority of the colonial inhabitants of North Carolina were thoroughly imbued with the ideas of "liberty and union, one and indivisible," and that nothing had power to cause them to stray from their faith. While this was the fact as to the colonists as a whole, there was a minority that, fearing God more than man, and believing that the right of kings to rule was a divine institution, stood firmly by the monarchical officers of Great Britain and imperiled their properties and lives in de-

fence of their sovereign. In this and in other States such men were called Tories, and their opponents Whigs. Fayetteville (or Cross Creek as it was then called) and the farming region about it had been settled originally by Scottish royalists. Those sturdy men and women (mainly from the Scottish Highlands) had risked their all for the Pretender, and when his cause was irretrievably lost they emigrated to this section, (having obtained grants of land from the Lords Proprietors,) and here they laid, broad and deep, the foundations of those social, educational and political institutions and ideas that have ever controlled the white people in all that region lying between the Roanoke river, the Wilmington & Weldon Railroad, the South Carolina border, and the great bodies of land-locked salt water that, under various local names, constitute the eastern boundary of this extensive territory. Although a few Englishmen and Irishmen settled in the section whose boundaries have been given, yet nearly all who first joined in planting civilization there were Scotch royalists and followers of Charles Edward. Those people, especially those who took up land in this city and its vicinity, had resisted constituted authorities to their heavy cost and loss, and it was therefore not to be wondered at that when other colonists rebelled they stood by the crown. They had been on the losing side abroad, and by the irony of fate they went in for the same side in this new land to which they had come.

Fayetteville stands at the head of navigation on the Cape Fear river. For nearly a century before the late civil war it had been the seat of a great traffic by which West India goods and all manner of supplies (foreign and domestic) were sent to the interior in exchange for every kind of country produce. It was not unusual to see a hundred great carts drawn by two pairs of horses or mules throwing off or receiving goods. All the way between Knoxville, Tenn., Abingdon, Va., and Pikesville, Ky., and Fayetteville, the dirt roads for three-fourths of the year were lined with teams carrying country produce to and carrying imported goods from this city. For the century preceding 1861 this was one of the principal trading centers at which the interior marketed its produce and from which it drew its supplies. There are men of middle age living in the Appalachian counties of the three States that were brought up from boyhood to travel as carters between their homes and this city. They brought country produce of all kinds, and drove before them strings of horses and mules, herds of fat cattle, bands of sheep and droves of swine, finding here a ready market for all they had not been able to sell while en route. Here they loaded their wagons and pack animals and started for their distant homes.

Before the revolutionary war the commercial importance of this city was greater even than Wilmington's. Its misfortunes after that period were due to the Toryism of its principal people. Wilmington gained what Fayetteville lost, and this city, at the head of Cape Fear navigation, was for a long period unable to regain its business prestige. But time, pluck and pertinacity will overcome the greatest obstacles, and as the old Scotch stock has the last two in unbounded measure, the time came when Fayetteville once more made the most of its opportunities and became (for this State) a great commercial center.

In looking through the town's records I am surprised to find that next to the Scotch comes the New England element in the population of this place for the last three-quarters of a century. The old cemetery of this city—a most interesting and instructive place for strangers seeking information—has in its midst many monuments to the worthies of the preceding century, and among them are more than three-score that commemorate New England men and women whose lives were spent and whose deaths occurred here. The New Testament assures us that the average of man's years are three-score and ten, yet that "by reason of strength" they may be four-score years. The marble memorials in the old God's-acre of Fayetteville tell of many men and women that died at an advanced age, and among them are several score of people of New England birth. Could any better testimony be given as to the healthfulness of this town? All the foregoing is but preliminary to what I shall have to say of Fayetteville in later letter.

B. S. P.

Developing Louisiana's Resources.

Rush of Western Immigrants— The Opening Up of a Fine Country.

[Special Correspondence MANUFACTURERS' RECORD.]

JEANERETTE, IBERIA PARISH, LA.,
March 28, 1887.

A few days ago I made a trip over an out-of-the-way but superb country with the president of a new railroad. This railroad will open up a country off the track of travel and one of the most tempting countries in the South, no matter from what ordinary standpoint it be regarded. If you consider its healthfulness, it is fully within the influence of the breezes of the Gulf of Mexico, which have sanitary aspects, only very recently having consideration from the medical world, curative or greatly ameliorating effects on catarrh, asthma, bronchitis, rheumatism, neuralgia and nervous affections. If you consider its soil, it is one of the most fertile in the United States. Indeed, few, if any, in Louisiana equal and hardly any surpass its fertility, and every well-informed person who knows the fertility of Mississippi bottom lands knows what such praise means. But these lands, unlike those of the Mississippi bottom, are entirely exempt from overflow, so that there are the merits of great fertility, salubrity and immunity from overflow. If one will duly weigh these advantages they are very great.

Let me give another great consideration—the extremely low price at which many of these lands are held. This is mainly owing to the fact of their being out of the track of travel, and their being in no demand, by reason of their not being known to the land-seeker. While there is now a most marked immigration into the more western area of Southwest Louisiana of thrifty farmers from Iowa, Minnesota, Illinois, Nebraska and other Western States, this movement has rushed by the country I am noticing in this letter.

It was partly to meet the demands of these hungry land-seekers from the West that this road was projected. So large has been the wave of this Western immigration into Southwest Louisiana that it has spread over almost all the area contiguous to the railroad, and so closely possessed it that from the almost pathless prairie of two or three years ago, where land by the tens of thousands of acres could be had by homesteading and tree claims, there is now little, if any, chance to get lands for homesteads, and prices range so high as to frequently deter purchasers. Finding that many farmers went out on the Morgan's Louisiana & Western Railroad (the Southern Pacific now called) and did not purchase for one and another reason the land in more Western Louisiana, the projectors of the Jeanerette, Abbeville & Western Railroad determined to build a line from Jeanerette towards the Gulf of Mexico that should have the double purpose of throwing open the country it should traverse to immigration and give to Abbeville (the county seat of Vermillion) access to the outside world. The distance is only about 30 miles, but Abbeville had about as well have been a hundred, for no one goes there but on business, and then with reluctance that business should be so exacting. I have made the trip several times, and it is wearisome. By rail one could ride there in an hour from Jeanerette; by stage it is five hours or more. And if it should be a raw or rainy day in winter and an eight-hour drive, the person who makes the trip concludes that the country out there won't suit.

A railroad through this country is all that is needed to densely populate it. I have mentioned the points of its fertility of soil, its healthfulness, the cheapness of its lands. I ought to mention the variety of its products. I cannot go into a minute particularization of these, but I may say generally

that corn, rice, oats, buckwheat, rye, barley (I think wheat) can be most successfully and profitably raised among cereals. Cotton, ramie, jute are successes as fibres. In grasses, besides the native grasses, (or those now thoroughly at home by climatic sympathies), such as Bermuda (*Cynodon dactylon*), Japan clover (*Lespedeza striata*), Gazon (carpet grass, *Paspalum ovatum* and *lanceolatum*), crab (crop) grass (*Paspalum fuiformes*), the sedges (*Andropogon virginicus* and *scoparius*), nimblewill (the botanical name escapes me), and I know not how many more. Besides these native grasses, I say it has been amply demonstrated that the clovers, red, white, lucerne, etc., timothy (*Phleum pratense*), red top (*Agrostis vulgaris*), Kentucky blue grass (*Poa pratensis*), orchard grass (*Dactylon glomerata*), and other favorite Northern grasses will most successfully thrive and grow from November to July, and so with native grasses make a year-long pasture of living green, so as to dispense with the necessity of making hay and giving most incomparable advantages in beef and butter making in winter as well as in summer.

The country has been abundantly and successfully tested, too, in raising improved breeds of cattle.

In fruits I know not what one cannot raise, even to the orange; although the cold winter before last killed badly the oranges on Mr. Joseph Jefferson's home, near which this road runs. But the peach, pear, apricot, nectarine, quince, olive, grape, strawberry, fig, blackberry, etc., flourish. One can eat vegetables the whole year round, and fruits almost as long. For enjoying life the country can hardly be excelled on the continent.

But I ought not to forget that this road will traverse the sweetest portion of the "sugar-bowl" of Louisiana. It will run through some of the richest districts in the famous "Attakapas country"—a country known as the best sugar country in the United States. When it is said it will run near the "Cypremort country" and other areas equally as fertile and well suited to sugar raising, nothing more need be said.

The day is near when cane raising and sugar making will be distinct industries. I advocated this in 1874, but I was "a voice crying in the wilderness then." Now it is a commonly canvassed scheme, and certain to be. When this shall come this railroad will be a signal area for sugar raising. Sugar refineries will meet with peculiar encouragement from this railroad, and will find it one of the very best territories to operate in. When I say that much of that country will bring from 20 to 25 tons of cane per acre; that a sugar refinery can well pay \$4 per ton; that at least half the receipts to the cane raiser are net profits, (even with present slipshod methods)—on above figures one can see the inducements offered to people to raise sugar, where land is to be had at from \$2 to \$20 per acre and less. I ought to say that at Jeanerette the road will join with the great Southern transcontinental route, where the travel and traffic is now immense and increasing greatly month by month.

I should like to say more on the topic of health, but space forbids. The great actor Joe Jefferson grew enthusiastic as he dilated to me on this score when I stopped for a brief visit of late at his charming home, "Orange Island." The road will run near this lovely spot, one of the most beautiful known to me. Mr. Jefferson particularly expatiated on the restful charm of the climate; its soothing effect on shattered nerves and overworked brain, and gave me some illustrations of some of his friends who had come there nervous wrecks and gone back toned up to vigor and dancing pulses.

The country through which this road will run is from a level plain to a very gently undulating surface. The costs of building the road are so insignificant that I will not hazard taxing the credulity of any reader by dealing in generalities, but will have recourse to the report of the engineer-in-chief,

who has made a survey, map of the route, profiles, estimates, etc. He says: "The average (grade) by my profile is one foot two inches." Think of that! Again: "I am well pleased with the result of the survey. I have never seen a route so easy and cheap of construction. The profile reveals one fact plainly, namely, the great benefit that will in many places result in drainage to the lands. Miles can be completely drained by the railroad ditch. * * I have shown map and profile to several engineers of prominence, and they concur with me that it is a good country for a railroad, and that the conditions for construction are most favorable." In justice to the engineer, it should be said that he is no novice, but has been connected prominently with some of the most important railroad work in the South.

Mr. F. M. Welch, of Jeanerette, is a practical railroad builder, familiar with bridge building, grading, track laying, etc. He says it is the most eligible country in which to cheaply build a railroad he ever saw. I have no practical knowledge on railroad building, but from an ocular observation it seems to me that, for the greater part of the route, hardly a spadeful of dirt need be thrown for grading.

Unlike much country where railroads nowadays are constructed, this country has ample business to support a railroad. It is well settled and is in a line of agriculture where a railroad will command the transportation of the products. For instance, it is a great sugar-making country. Transportation of sugar in hogsheads is heavy work by ordinary hauling. On the best of roads two hogsheads is a load for four mules. I met on going out to Abbeville a-half dozen or more wagons in one caravan, with four mules each. Each had two hogsheads of sugar. The cost of each hogshead for the 18 miles was \$3 to Jeanerette from the sugar-house. For the 12 hogsheads of sugar here was the loss for a day of 24 mules and six drivers. The cost of transporting a hogshead of sugar from Jeanerette to New Orleans by railroad, 113 miles, is \$2.25. This tells the story. Another illustration: I met going to Abbeville from Jeanerette in one batch eight 4-mule wagons and a 4-oxen wagon hauling lumber to Abbeville, 30 miles. They had about 7,000 feet of lumber. It cost \$7 per thousand feet to haul it from Jeanerette to Abbeville. It cost \$12 to \$15 per thousand at the mill. Here was a loss of time of 36 working animals two days and nine drivers for the same time. These are only two illustrations to show the needs of a railroad.

The stimulus such a railroad would give to sugar-making would be immense. Sugar-cane is so heavy a product to transport to a mill that after one gets a few miles from a sugar mill cane raising is not to be thought of. Here is a country that has no superior and hardly an equal in the United States for the quality and quantity of its sugar-cane almost totally without sugar-houses for the best part of its area. This railroad would certainly stimulate the location of sugar refineries along it, and as a result the planting of tens of thousands of acres in sugar-cane. Sugar planting can never pay less than now, and Mr. John Dymond, one of the most successful and important sugar planters, and a most cool, conscientious and painstaking statistician, has shown in a recent address that by a division of sugar planting into the branches of cane raising and sugar refining, Louisiana, even at present prices, can very profitably follow sugar planting. This road therefore not only offers a business ready made as an incentive to its construction, but will be a promoter of further and great development, and it will pay well from its start. The fertility of the soil, healthfulness of the country, the certainty of Western immigration for health, pleasure and profit, assure several thriving towns on the route as further allurements to capital. There are other inducements I do not enumerate, but if any capitalists desire information I should be glad to give it by being

addressed at 26 Camp street, New Orleans, La. Mr. F. M. Welch, president of the Jeanerette, Abbeville & Western Railroad, lives at Jeanerette, Iberia parish, La.

In the course of a long study and wide experience of the South I never saw a lovelier country for purposes of health, pleasure or money-making. There could be no greater tribute paid it than that Mr. Joseph Jefferson, the illustrious personator of Rip Van Winkle, selected a winter home there out of preference to it over all spots in this wide, wide world. M. B. HILLYARD.

Tuscaloosa Advantages.

TUSCALOOSA, ALA., March 29, 1887.

Editor Manufacturers' Record:

It has been the writer's intention ever since the formation of the Tuscaloosa Coal, Iron & Land Co. to call attention to its claims, plans and prospects through the columns of your widely circulated and influential journal, and this intention, with your kind permission, he now wishes to carry out.

In a couple of articles published in your paper over a year ago I set forth some of the many advantages possessed by the town of Tuscaloosa as a center both of manufacture and commerce. I then called attention to its position (exactly analogous to that of Pittsburgh) at the head of navigation of the only water outlet to the great Alabama mineral field, and immediately on the Southernmost limit of the great Warrior coal field, with iron ore within 17 miles in one direction, and within 5 miles in another; in both directions immediately on the line of the Alabama Great Southern Railroad; and also to the fact that south of it stretches the great Warrior river bottom, which further down widens out into the great central cotton district of Alabama, known as the Black Belt, one of the finest cotton countries in the known world, while to the west lay the equally productive cotton country of central Mississippi.

These advantages then presented will, if carefully considered, I think, be found to make it the natural center of Alabama iron and cotton manufacture, second to no inland town of the State as a commercial point.

According to the latest report of the State geologist, the coal measures are thicker in Tuscaloosa county than in any other portion of the field. We quote the exact language of the report:

"Tuscaloosa county.—The coal measures of this county are believed to be thicker than in any other part of the Warrior field, or in any other part of the known world. There are in these measures some 53 seams of coal which vary in thickness from about 2 inches to 14 feet, and which have an aggregate thickness of about 125 feet, pure coal. Of these 53 seams, 25 are of workable thickness, or contain 18 inches and over of pure coal; of these 25 seams, 14 have 2 feet 6 inches and over of pure coal; of these 14 seams, 9 have over 4 feet of coal, and of these 9 seams, 3 have more than 6 feet of coal." "Among these coals are to be found seemingly almost every variety of bituminous coal. Some of them are bright and hard, and are well adapted to handling and stacking, while others are of a dull color and are of a friable and crumbly nature. Some of them appear to be especially fitted for coking and blacksmithing purposes, while others might be called steam or heating coals, and others still, gas coals."

Tuscaloosa actually stands upon these coal measures, and from the above quotations, from unquestioned and disinterested authority, it must appear evident that fuel at Tuscaloosa must be at a minimum as to cost and a maximum as to quality. Iron ore and limestone in unlimited quantities extend down the Alabama Great Southern Railroad to within 17 miles or less, being the extension of the Birmingham red mountain, while south from the town are large deposits of

[CONTINUED ON PAGE 325.]

CONSTRUCTION DEPARTMENT.

THE growth of the industrial interests of the South is strikingly illustrated in our "Construction Department." Just one year ago to-day this department occupied exactly one page, and in it there were *eighty-nine* items relating to new industries. In this issue this department covers nearly *three pages and a-half*, and there are *two hundred and ninety-four* items. Comment is hardly necessary. Nothing could more pointedly tell the tale of Southern growth.

ALABAMA.

Anniston.—Messrs. Alfred Tyler and Samuel Noble, of Anniston, and Messrs. Gurnee and Aldrich have purchased the entire property of the Cahaba Coal Mining Co. for about \$1,000,000, and, in addition, 15,000 acres of coal and iron lands. They will spend about \$1,000,000 in developing the properties, opening new mines, &c. 500 coke ovens will be built to supply the two new furnaces at Anniston with coke.

Anniston.—A \$25,000 bank building will be erected on Noble street by D. F. Constantine.

Anniston.—D. T. Parker has been elected president, and S. H. Smith, secretary and treasurer, of the Anniston Pipe Works, previously reported.

Anniston.—It is rumored that the consolidation of the car wheel and car works and the rolling mill of Noble Bros., previously reported as talked of, into a \$2,500,000 company to build extensive locomotive works, &c., has been consummated, but we have no confirmation yet.

Ashville.—The capital stock of the Riverside Land & Lumber Co., reported last week as incorporated by J. M. Smith, of Talladega, and others, is \$75,000.

Athens.—W. H. Sykes will start brick works with a daily capacity of 30,000 bricks.

Athens.—Brick works have been started by C. N. Crenshaw.

Bessemer.—William Berney, of Birmingham, lately reported as to build a hotel, has, with E. A. Burke and R. A. Corbin, of New Orleans, La., incorporated the Montezuma Hotel Co., capital stock \$75,000.

Bessemer.—The New Orleans Land & Building Co. has been incorporated by E. A. Burke, T. L. Airey and M. F. Thompson, of New Orleans, La., and others.

Birmingham.—The North Alabama Oil & Asphalt Co., previously reported, will receive bids until April 9 for drilling 6 oil wells near Decatur.

Birmingham.—The Enterprise Rolling Mill Co., lately reported as incorporated by Oliver Wieser and others, will build a mill with a daily capacity of about 100 tons. Work will be commenced about May 1.

Birmingham.—Whilden & Campbell are reported as intending to erect a three-story coffee-roasting and spice mill.

Birmingham.—It is rumored that file works, pressed brick works, a chair factory and lime works are to be started at the new town to be laid out by the Gate City Land Co., of Birmingham. If true, this company can give particulars.

Birmingham.—A company is being organized with a capital stock of \$50,000 to establish a large dairy farm and creamery.

Birmingham.—The Birmingham Marking Pot & Manufacturing Co. has been organized by W. P. Payne, R. P. Duncan and T. C. Finney.

Birmingham.—J. A. Montgomery is negotiating for the location of car works at Leeds.

Birmingham.—W. A. Jordan & Co., P. O. box 553, are advertising for 3,000,000 bricks.

Birmingham.—There are prospects of a large sash, door and blind factory being erected.

Birmingham.—The Alabama Rolling Mill Co., capital stock \$250,000, has been organized to build a 60-ton rolling mill about four miles from Birmingham. Machinery is now being purchased. Fred. Sloss is president; W. H. Hassinger, vice-president and general manager, and D. M. Forker, secretary and treasurer.

Brewton.—C. L. Sowell, S. R. Sanford and E. Downing contemplate building a large lumber mill.

Calera.—The Calera Land Co. want the address of parties handling machinery for manufacturing wheelbarrows.

Decatur.—Charles Tippie has contracted to erect the buildings for the works of the Ivens & Sons Machinery Co., previously reported.

Decatur.—It is reported that a saw and planing mill is to be erected by E. C. Payne & Co., of Williamsport, Pa.

Decatur.—The Decatur Land, Furnace & Improvement Co. are negotiating for the location of a rolling mill.

Decatur.—The Young Men's Christian Association will erect a three-story building.

Decatur.—N. K. Mead and associates, of Cincinnati, O., have organized a \$50,000 stock company to build a saw and planing mill and a sash, door and blind factory.

Gadsden.—It is reported that a company has been formed to erect a paint mill, with Mr. Chumley as manager.

Greenville.—A street railroad will probably be built. The mayor can give information.

Mobile.—Michael & Lyons have recently started a cigar factory, and will shortly increase their capacity.

Montgomery.—The Southern Cotton Oil Co., of Philadelphia, Pa., have selected a site for one of their oil mills, and will build at once. The daily capacity will be 150 tons seed.

Montgomery.—The North Montgomery Belt Line & Manufacturing Co., capital stock \$500,000, has been organized with John D. Roquemore as president, and H. C. Davidson, secretary and treasurer. The company own and will develop 913 acres of land.

Montgomery.—Bids for constructing the extension of the Talladega & Coosa Valley Railroad from the Coosa river to the Georgia Pacific Railroad will be received until April 10 by J. A. Montgomery, general manager.

Notasulga.—It is reported that the Notasulga Granite Co., capital stock \$500,000, will be organized by Birmingham parties to develop granite quarries.

Perote.—Coal has been found on the land of Rumph & Hixon and will be developed.

Pollard.—A planing mill is reported to be built by the Dunham Lumber Co.

Riverside.—Crowder & Smith are enlarging the capacity of their saw mill.

Russellville.—W. J. Nance has contracted to mine iron ore for the Sheffield Furnace Co., Sheffield.

Selma.—The Selma Land, Improvement & Furnace Co. will subscribe \$25,000 to aid in building a hotel to cost not less than \$50,000.

Selma.—A company has been formed to build a large wagon factory. The Selma Land, Improvement & Furnace Co. can give information.

Selma.—The Star Ice Co. will start a soda water factory.

Selma.—A fertilizer factory is projected.

Selma.—The company reported last week as organized to build a rolling mill, will shortly commence work. Mr. Peacock, of Pittsburgh, Pa., is interested. The authorized capital stock is \$50,000.

Talladega.—A \$20,000 institute is to be built for the blind. Plans are being prepared. The Talladega Real Estate & Loan Association can give particulars.

Tuscaloosa.—Bruce & Morgan, of Atlanta, Ga., are preparing plans for a building for the Merchants' Bank, George A. Searcy, president.

ARKANSAS.

Argenta.—The Argenta & Big Rock Street Railroad Co., capital stock \$50,000, has been incorporated by Samuel B. Adams, John D. Adams, D. Miller, J. K. Brantley and J. F. Boyle.

Arkansas.—The Memphis, Arkansas & Texas Railroad Co., reported last week as incorporated to build a railroad from Memphis, Tenn., to Pine Bluff, Ark., has been organized at Memphis with George Arnold as president; Holmes Cummings, vice-president; George Gillam, secretary, and C. W. Schulte, treasurer.

Bear.—J. W. Bentz talks of erecting a stamp mill and hoisting machinery at a cost of \$10,000.

Dardanelle.—A company has been organized to start a wagon factory.

Fort Smith.—The Ohio Iron Wheel Co. have made a proposition to build a branch factory, which, it is said, has been accepted.

Fort Smith.—A company is being organized to establish reduction works to treat ores from Golden City. The capital stock will be about \$100,000. Jay Guy Lewis can probably give information.

Fort Smith.—The Little Rock & Ft. Smith Railroad Co. (office Little Rock) is to be extended from Van Buren, Ark., to Fort Gibson, Ind. T.

Hot Springs.—The Phoenix Mining Co. have purchased a 75-ton smelter and machinery for electric lighting.

Hot Springs.—The Crescent Mining & Smelting Co., reported last week, has been organized with Geo. Miller as president; L. S. Thompson, vice-president; George W. Watson, secretary, and J. P. Mercer, treasurer. The company is now developing mines.

Hot Springs.—O. A. Johnson and others will build a large hotel.

Little Rock.—The Little Rock Automatic Refrigerating Co., capital stock \$75,000, has been organized by Logan H. Roots and others. They will order machinery for their plant at once.

Little Rock.—The Little Rock & Texas Railroad Co., capital stock \$5,000,000, has been incorporated to build a railroad from Little Rock to Hackett City. The directors are John O'Day, of Springfield, Mo.; A. Douglas and E. D. Kenna, St. Louis, Mo.; W. H. H. Clayton, James Brizzolara, Stephen Wheeler and Charles Hill, of Fort Smith.

Little Rock.—A soapstone quarry will be developed by Mr. Wallis.

Little Rock.—The West End Land & Improvement Co., capital stock \$100,000, has been organized with Howard Adams, of Girard, Kan., as president.

Little Rock.—The Mountain Park Cottage Sites & Improvement Co. has been organized with E. V. Duell as president; Thomas Lafferty, secretary, and R. B. Gress, treasurer. The company will build a hotel and a short railroad. The authorized capital stock is \$100,000.

Little Rock.—C. E. Cottrell, of Detroit, Mich., is investigating the advantages of Little Rock as a location for a woodenware factory.

Little Rock.—C. Welch, of Birmingham, Ala., will, it is stated organize a company with a capital stock of \$100,000 to develop granite quarries.

Little Rock.—It is reported a wagon manufacturing company, of Decatur, Ill., have decided to move their plant to Little Rock.

Van Buren.—M. Lynch, J. P. Hattaway and A. M. Colgrove have bought the lumber and planing mills of Martin & Anderson, and organized as the Van Buren Planing Mills. They will add new and improved machinery.

FLORIDA.

Bonifacio.—Mr. Thomas will build a church for the Congregationalists. It will probably cost about \$12,000.

Bonifacio.—H. Banmeister will start a fish canning factory.

Bonifacio.—A large sanatorium is to be built 2 miles from Bonifacio. Mr. Chase can give information.

Florida.—W. T. Sylvester, J. W. Sylvester, William E. Davies, Isaac W. Maclay and E. W. Ebbetts have incorporated the Jacksonville & Gulf Railway Co. to build a railroad from Jacksonville to Ocala.

Gainesville.—The Presbyterians will build an \$8,000 church.

Okahumpka.—R. H. Ramsey, 207 East Cheltenham avenue, Philadelphia, Pa., contemplates starting a factory to manufacture tubs, buckets, &c., and invites correspondence with parties having machinery suitable for such work.

Palatka.—H. L. Hart, J. C. Vertes, W. J. Webb, S. J. Kennerly, S. U. Hammond, Marcus Loeb and others have incorporated the Palatka & Northwestern Railway Co. to build a railroad from Palatka to a point in Gadsden county, with several branches.

Pensacola.—The Navy Department will make extensive improvements at the navy yard, erect new buildings, &c.

Punta Gorda.—It is reported that a hotel is to be erected to cost several million dollars.

Sanford.—Thomas Parkes, of Bellview, contemplates starting a wire and picket fence factory.

Tampa.—The Tampa Hotel Co., capital stock \$50,000, has been organized to build a hotel to cost about \$150,000.

GEORGIA.

Atlanta.—E. P. Howell, Geo. W. Adair, Henry S. Tompkins and others have organized the Atlanta Manufacturers' Improvement Association, capital stock \$150,000, for the purpose of encouraging manufactures.

Atlanta.—A Bnai Brith Jewish Asylum is to be built at a cost of \$40,000. Jacob Haas can give particulars.

Atlanta.—William H. Parkins, James A. Burns and E. P. Burns have chartered the Atlanta Construction Co., capital stock \$10,000, to construct buildings, etc.

Atlanta.—The Empire State Electric Co., capital stock \$30,000, has been organized by H. A. Pearce, C. A. Coffin, T. A. Barlow, E. I. Garfield and E. Thomas, of Boston, Mass. Its object is to make and operate electrical machinery.

Atlanta.—The Atlanta Improvement Co., lately reported as incorporated and to build the Atlanta & Hawkinsville Railroad, has been organized with H. T. Inman as president; C. A. Collier, vice-president; J. K. Brunner, secretary; Robert J. Lowry, treasurer, and H. C. Harris, general manager. The company proposes to build the road at once.

Americus.—It is stated that A. P. Riple will build a fine hotel.

Augusta.—The board of education will erect a school building corner McIntosh and Telfair streets.

Augusta.—The Thompson-Houston Electric Co., previously reported, have purchased a site and will at once erect their plant. C. V. Walker & Co. can probably give information.

Augusta.—A grist mill has lately been started by W. H. Nurnburger.

Augusta.—The Georgia Bleachery Co., capital stock \$50,000, has been incorporated to bleach, dye, print and finish cloths and yarns, by Charles H. Phinizy, William C. Sibley, Hamilton H. Hickman, Charles Estes, William E. McCoy, Barny S. Dunbar, James P. Verdery and Charles G. Goodrich.

Calhoun.—J. M. Smith will move his wood-working factory from Resaca to Calhoun.

Cartersville.—The R. H. Jones & Sons Manufacturing Co. are erecting some new machinery at their carriage factory near Cartersville.

Cedartown.—The Cherokee Iron Co., A. G. West, president, contemplate building an additional furnace with a capacity of 100 tons daily.

Clayton.—Donaldson, Freeman & Co., lately reported as erecting a grist mill, have also erected wood-working machinery.

Columbus.—The Central Railroad & Banking Co. (office, Savannah) will erect another cotton compress. It will cost about \$65,000. Work will begin in about 30 days.

Conyers.—J. H. Almond will rebuild his gin lately reported as burned.

Dalton.—The Crown Cotton Mills will put in additional new machinery to increase their daily capacity about 50 per cent.

Dalton.—There is talk of building a cotton check mill soon. G. W. Hamilton is said to be interested.

Dalton.—O. H. Pennock will, it is said, build a hotel.

Dalton.—The Rocky Face Mineral Land Improvement Co., will be incorporated.

Dalton.—The Dalton Street Railway Co. has been organized with D. P. Bass, F. T. Hardwick, T. R. Jones and others as directors. Bids are invited for furnishing the rails, cars, etc.

Elberton.—Thomas M. Swift, W. M. Wilcox and James M. Corby will erect a factory to manufacture sewing machine attachments. T. M. Swift will be general manager.

Forestville.—A. W. Ledbetter, George P. Burnett and others contemplate organizing a land and street railroad company.

Graysville.—The Graysville Mining & Manufacturing Co., reported last week as purchasing the property of the Catoosa Mining & Manufacturing Co., have also purchased the property of C. W. Gray & Co., and will at once build 5 new lime kilns and cement works and in the near future the woolen mill. Other improvements will also be made.

Griffin.—The Griffin Improvement Co. has been organized, with a capital stock of \$100,000. J. D. Stewart is interested.

Griffin.—M. L. Bates wants to purchase gin and press for ginning and packing cotton with a capacity of 30 bales per day.

Jonesboro.—A hotel will be built by D. P. Ferguson. He has bought a site.

Macon.—The contract to build the Orphans' Home, previously reported, has been let to Petit, De Haven & Co. It will cost about \$12,000.

Macon.—The Macon Improvement Co., capital stock \$50,000, has been formed by Elliott Estes, M. Nussbaum, R. F. Lawton, Thomas Willingham, R. W. Patterson and others.

Macon.—The Jesuits will build a fine church. F. J. M. Daly can give particulars.

Marietta.—W. M. McKenzie, W. H. Warren and W. J. Manning have incorporated the Marietta Guano Co., to operate the guano factory owned by them. Their capital stock is not to exceed \$30,000.

Milledgeville.—The Baldwin County Improvement Co. has been organized to establish small industries. A tannery and a canning factory will be started.

Oglethorpe.—C. R. Keen contemplates starting a wood-working factory next fall.

Rome.—The Atlanta Bridge & Axle Co., of Atlanta, have received the contract to build the bridge across the Oostanaula river for the Rome Land Co., previously reported. It will cost from \$15,000 to \$20,000.

Rome.—A charter is being secured for the Rome Rolling Mill Co. J. L. Bass can give information.

Rome.—The Rome & Carrollton Railroad Co., J. D. Williamson, president, are advertising for proposals to build (in sections) about 140 miles of standard-gauge road and 8 iron bridges. It is reported that several iron furnaces will be built along the line of this road as soon as completed.

Rome.—F. Pence has been elected president, and W. J. Hall, secretary and treasurer, of the Rome Chair Factory Co., reported last week. The capital stock is \$10,000.

Salt Springs.—The Salt Springs Land & Improvement Co. has been organized by E. W. Marsh, Sr., S. S. Marsh, S. M. Inman and E. W. Marsh, Jr., of Atlanta, and J. A. Watson, Salt Springs, and others. The capital stock is \$250,000.

Trenton.—The Lookout Valley Iron & Coal Co. has been incorporated.

Tunnel Hill.—Bowman & Spriggs are opening manganese mines.

West Point.—The Union Milling & Manufacturing Co., capital stock \$50,000, has been organized by W. H. Huguley & Co., W. H. Burgess and W. N. Gachel. The company will establish a flour mill at once, and later on a factory to manufacture batting and other cotton goods.

West Point.—The West Point Manufacturing Co., reported last week to rebuild their burned cotton mills, will want nearly an entire new plant of machinery. The new mill will have 200 duck looms.

White county.—The name of the syndicate lately reported as purchasing the gold mines and to develop them is the Hamby Mountain Gold Mining Co.

KENTUCKY.

Bardstown.—The T. P. Benjamin Co., capital stock \$500,000, has been organized to bore for oil and gas by T. P. Benjamin, of Pennsylvania, and G. W. Felt, of Sioux City, Iowa.

Boston.—The Surprise Oil & Gas Co., of Cincinnati, O., J. V. Herley, president, are boring for oil and gas.

Catlettsburg.—It is stated that the sawmill of Corcoran, Richardson & Co., reported in this issue as burned (loss \$20,000) will probably be rebuilt.

Corbin.—The Louisville & Nashville Railroad Co. (office Louisville) are surveying for an extension of their railroad from Corbin, about 100 miles, to meet the extension of the Norfolk & Western Railroad from Graham, Tazewell county. Part of the extension is under contract.

Covington.—The Knights of Labor Cooperative Cigar Manufacturing Co. has been incorporated.

Covington.—The North Kentucky Natural Gas Co. has received permits to lay pipes through the city.

Covington.—George F. Card, George McLaughlin, John A. Gano, H. K. Lindsey, Thomas F. Corry and George W. Howell have incorporated the George F. Card Manufacturing Co., capital stock \$10,000, to manufacture and sell electrical machinery.

Frankfort.—W. L. Pence is preparing to rebuild his saw mill, reported last October as burned. He will contract for machinery in a few days. The capacity be from 40 M to 60 M feet daily. The cost will be \$12,000.

Lexington.—Messrs. Speyer will organize a company to bore for natural gas and oil.

Louisville.—The City Railway Co. will extend their lines.

Louisville.—J. Schwartzwalder & Co., of New York, have secured a site and will erect a large beer-keg factory. It is said they will employ 1,000 hands.

Louisville.—Efforts are being made to organize a stock company to build a large cotton mill.

Louisville.—Henry Pilcher's Sons will build a new organ factory to employ 200 hands.

Louisville.—B. F. Avery & Sons are building a four-story addition to their large plow works.

Nicholasville.—\$22,000 have been subscribed towards purchasing land and building a hotel. A company will be incorporated. J. S. Bronaugh can give particulars.

LOUISIANA.

Gretna.—The Southern Cotton Oil Co., of Philadelphia, Pa., have purchased a site of 125 acres for the cotton-seed oil mill they will build at once. The capacity will be 150 tons of tons of seed daily.

Louisiana.—The Tensas Land Improvement Co. has been organized with a capital stock of \$3,500,000.

Logansport.—A large saw mill is being erected.

Maringouin.—The Texas & Pacific Railroad Co. (office Dallas, Texas,) will build a round-house and repair shops.

Mansfield.—A stock company will be organized to purchase and develop about 1,000 acres of coal lands. J. E. Hewitt can probably give information.

New Orleans.—A stock company has been formed to build a large rice mill. The president of the Produce Exchange can probably give information.

New Orleans.—The distillery of the New Orleans Pinewood Distilling Co., reported last week as burned, is being rebuilt on a larger scale. The loss was about \$10,000.

New Iberia.—Gebbert & Sons contemplate erecting a large ice factory.

New Iberia.—The Iberia Opera House Co., capital stock \$20,000, has been organized with Robert S. Perry, William Kramer, W. E. Satterfield, Fred. L. Gates and A. Erath as directors. The company will soon begin erecting an opera house.

New Orleans.—E. A. Ducros and others have organized the New South Land Improvement Co., capital stock \$10,000,000, to develop mineral, timber and agricultural lands, engage in manufacturing, &c.

New Orleans.—The Cross-Tie Lumber Co., capital stock \$10,000, has been chartered by Edward DeArmas, E. J. Barnett, J. D. Willis and others. Its object is to manufacture cross-ties, bridge timbers, &c.

Natchitoches.—Robinson & Lacey, of Grand Rapids, Mich., have purchased 30,000 acres more of pine timber lands.

Opelousas.—S. J. Holly has purchased a site for building a rice mill.

Shreveport.—The name of the company previously reported as being organized to build an opera house is the Shreveport Opera House Co. The capital stock is \$40,000. Ground has been purchased. Samuel N. Ford can give particulars.

Washington.—It is reported that S. J. Holly, who will build a rice mill at Opelousas, also contemplates putting up one at Washington.

MARYLAND.

Baltimore.—The Second Universalist Society will build a church corner Guilford avenue and Lanvale street.

Baltimore.—\$9,000 has been appropriated to build an addition to the Northeastern markethouse, and \$56,000 to build two school houses.

Baltimore.—The Scott Manufacturing Co. has been incorporated to manufacture hardware, &c., by Robert P. Scott, William G. Suydam, Charles W. Atchinson, Edward W. Suydam and Thomas T. Boswell. The capital stock is \$30,000.

Baltimore.—The Philadelphia, Wilmington & Baltimore Railroad Co. (office, Philadelphia, Pa.) are making surveys for an extension of their road from Bayview Junction to Tivoli, where large steel works are to be located.

Baltimore.—The large candy factory, previously reported as to be built by Darby & Co., will be ten stories high and cost about \$65,000. I. Griffith has the contract.

Baltimore.—Henry Werner will put two new 125-horse-power boilers in his brewery on Pennsylvania avenue.

Frederick.—The name of the \$5,000 stock company reported last week as organized to manufacture stockings, with David Lowenstein as president, is the Frederick Seamless Hosiery Co. About 65 hands will be employed.

Freeland.—A. Shaver & Son have built an addition to their paper mill, 20x26 feet, and will shortly re-arrange their machinery and add some new machinery.

Ilchester.—The contract to build the iron bridge across the Patapsco river, previously reported, has been awarded to the King Iron Bridge Co., of Cleveland, O., at \$3,690.

Washington, D. C.—The contract to build 7 elevators in the State, War and Navy department has been let to the Crane Elevator Co., of Chicago, Ill., at \$17,190.

MISSISSIPPI.

Brookhaven.—It is stated that an ice factory and a cotton compress are to be built.

Chatawa.—The Illinois Central Railroad Co. (office, Chicago, Ill.) contemplates building a fine hotel.

Estabatchie.—L. C. Black, of Cincinnati, O., and J. B. Foraker, of Ohio, have purchased 1,000 acres of timber land and are negotiating with parties for the location of a lumber mill.

Vicksburg.—The Southern Land Co., capital stock \$50,000, has been chartered by E. S. Butts, George W. Rogers, T. M. Miller, Charles E. Wright and H. St. L. Coppe.

NORTH CAROLINA.

Asheville.—S. R. Chedester will build a five-story addition to his hotel.

Asheville.—N. T. Sherman and E. B. Stevens will start a cigar factory. They will employ 15 hands at first.

Asheville.—A sash, door and blind factory is being erected by the Tuckaseegee Lumber Co.

Charlotte.—The Southern Cotton Oil Co., D. A. Tompkins, Charlotte, N. C., engineer, want bids on eight 200 horse-power engines, eight 150 horse-power engines and eight batteries of boilers, each 400 horse-power, including all fixtures, f. o. b. on cars at makers' factory.

Cranberry.—The Cranberry Coal & Iron Co. have purchased some new mining machinery.

Davidson county.—The Cid mine has been purchased by a London (Eng.) company. They are making arrangements to develop the mine.

Danbury.—It is reported that the Pepper Mining Co. will resume the development of their mica mines in Stokes county and open coal mines near Stokesburg.

Elk Park.—A furniture factory is being built by Harper & Burnhart.

[CONTINUED ON PAGE 326.]

The Pneumatic Pulverizer.

The accompanying illustration shows the principle of pulverization in the Pneumatic Pulverizer. In this machine powerful opposing currents of dry superheated steam or air are so arranged and adjusted that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized. This, it is said, has been fully established by pulveriz-

pulverizers is from $1\frac{3}{4}$ to $2\frac{1}{2}$ tons of coal per 24 hours, or its equivalent in wood (the larger the plant the less it will cost for fuel and labor in proportion to the quantity pulverized).

The labor item is a minimum. Two men, including fireman, it is said, can attend a plant of fifty tons pulverizing capacity per day.

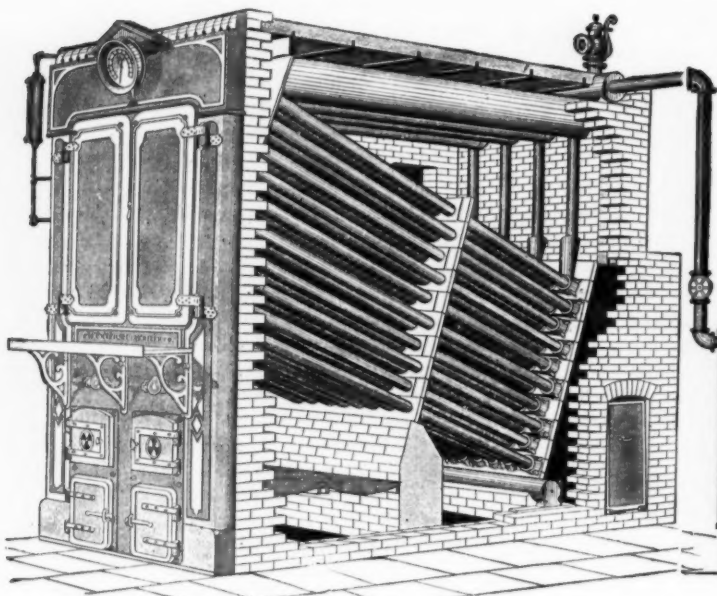
The company furnish (in all cases) a sectional water tube steam boiler of improved construction for economy and durability, including superheater to supply the pulverizers with dry steam of ample ca-

also a letter from Baltimore Pulverizing Co. which says: "The Pneumatic Pulverizer has very successfully pulverized everything we have tried, namely: Cement, phosphate rock, gold ore, coal, charcoal, magnetic sand and silice. It will pulverize float fine, any material to which speed can be communicated. Our plant of four pulverizers is in perfect order, and the expense for repairs has been almost nothing."

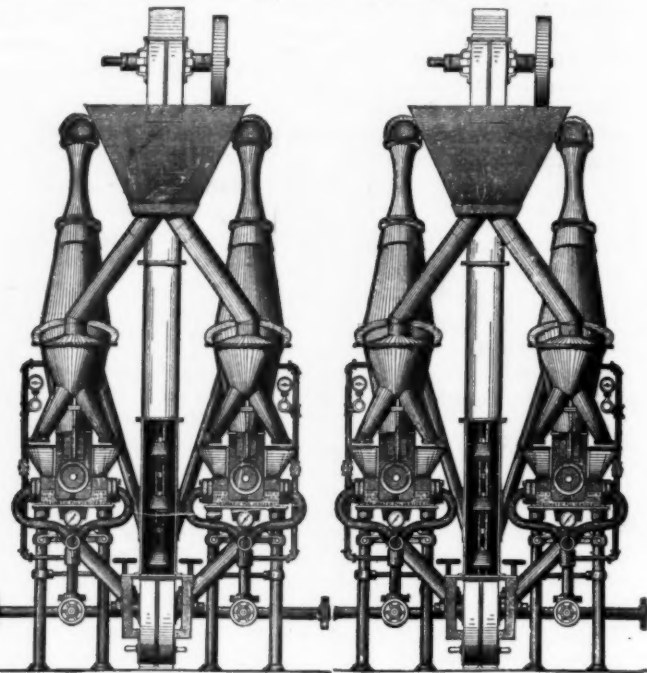
The company says: "Our reports from a plant working on silver ore in Mexico state that they pulverize the ore extremely fine. As a result, they obtain a much larger yield of silver, also saving from 40 to 50 per cent. of the time required for the treatment of the ore, and that the tailings show only a trace

fect drainage have made the Model City of North Alabama healthy beyond all precedent. We were told that, except for some inevitable family ailments and an occasional digestive disturbance during the watermelon season, physicians are not needed in that favored spot, and had become almost superfluous, like the man in one of Tourguineff's novels. If matters proceed in that fashion, the physicians of Anniston may have to join a theatrical troupe, and perform to perfection the character of the apothecary in Romeo and Juliet.

The modern Ponce de Leon would not go to Florida to seek the fountain of life, but to Anniston in search of exceptional salubrity.—Augusta (Ga.) Chronicle.



VIEW OF A COMPLETE PLANT OF FOUR PULVERIZERS MANUFACTURED BY PNEUMATIC PULVERIZER CO., ERECTED READY FOR WORK.



ing one of the most difficult ores (Chrome iron) continuously for months. A careful investigation of the practical operation of the Pneumatic Pulverizer the manufacturers say "will satisfy the most skeptical that it is the best and most economical way to pulverize gold and silver ores, quartz, or any flinty material. The high temperature of the super-heated steam currents employed, through which every minute particle of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon sulphurets and ores containing rusty gold. It purifies and cleanses the metal, whereby a much greater saving of gold is made possible, than by any other pulverizing process." It is complete within itself, only requiring a level floor to stand upon, and when in full working operation it is almost noiseless, and free from escaping dust. Damp ores that can be crushed so as to feed freely into the pulverizers, need no previous drying. The ores require crushing and should pass through a quarter inch mesh screen before entering into the pulverizer, after which, the operation is automatic and continuous, requiring but little attention.

The accompanying illustrations show both the construction in the sectional drawing and the general arrangement of these extremely simple and ingenious pulverizers. The work of pulverizing is performed by means of two jets of super-heated steam, which, acting under a boiler pressure of 200 pounds per square inch, throw the particles of ore against each other, as shown in the accompanying illustration.

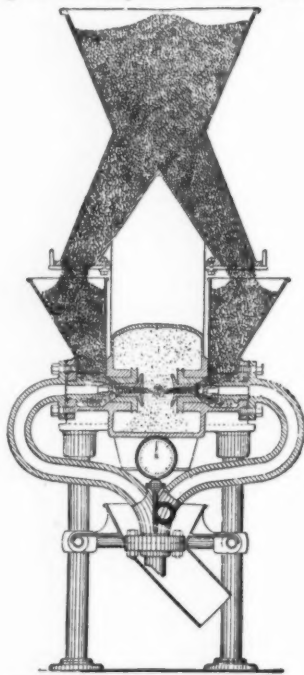
The ore should be crushed to pass through a quarter-inch mesh before it goes to this pulverizer; but so long as it will feed freely dampness does not interfere with the work; the superheated steam dries the ore.

The pulverized material is drawn away from the machine by a steam jet, the strength of which regulates the grade to any required fineness.

The jets of superheated steam are of three-sixteenth inch diameter, and the consumption of fuel required for a plant of six

capacity and suitable pressure. The boilers are tested to 500 pounds per square inch.

The pulverizer has but very little wear, confined, in fact, to the little nozzle pieces of the jets, which are of hard cast-iron, weigh about one pound each, and cost three



SECTIONAL VIEW OF PULVERIZER.

cents. These pieces are easily replaced in a few minutes.

The company publishes a letter from president of the Baltimore Chromo Works, which states "the twin plants furnished our works much more than equal our expectations and your representations. It is far superior (to the perfection of arrangements of buhr stones previously used by us), both as to fineness and reliability of execution as well as economy. In making the mineral grind itself I consider it accomplishes the great desideratum of pulverizing, and that I can hardly say too much in its praise." And

of silver; whereas, by the old method there remained from 20 to 40 per cent, while the cost of the movable wearing parts of the pulverizers is merely nominal.

Evidently where extremely fine pulverization is required, and especially where the material is very hard, this Pneumatic Pulverizer presents some peculiar advantages. The Pneumatic Pulverizer Co., whose office is 2 and 4 Stone street, New York, makes guarantee contracts, and is ready to put in plant of any capacity. As the machines are all of the same size and parts are all interchangeable, additional capacity is obtained by simply adding more pulverizers.

A Busy and Healthy Place.

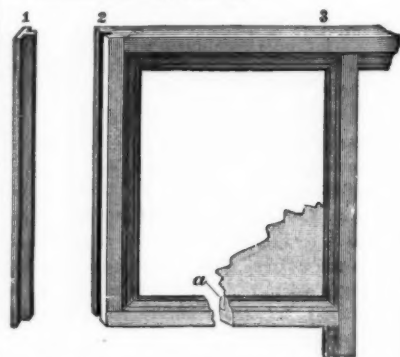
Although the good people of Anniston understand that the opening of the Coosa river is a matter of importance to them, they did not send a delegate to the Montgomery convention which had that project under advisement. The Hot Blast says:

Anniston regrets that she was unable to send anyone to the Coosa river convention last Tuesday. The fact is, the Intendant made strenuous efforts to appoint a committee, but no one had time to go. Each man claimed that he had too much and too urgent business. Only one man could be found who had any time; he was a doctor; but it then developed that, although he had plenty of time, he didn't have any money. Hence, he too was unable to go. We assure the convention, however, that we wish them success in opening the great Coosa to navigation.

The pocket veto of the river and harbor bill no doubt dampened the ardor of the Anniston business men, and they saw that opening of the Coosa was a long way in the future. The Hot Blast perpetrated a delicious and significant bit of humor that speaks volumes for the town. It showed, between the lines, that its merchants and miners and manufacturers were engaged in concerns of a more practical nature, and that wonderful enterprises at home were taxing the energies of a most industrious population. It also demonstrated that however excellent a place Anniston is for thrifty labor and profitable industry, the one branch of business that does not "boom" is the medical profession. Pure air, wholesome water and per-

Stuart Window Screen Frames.

The Stuart Window Screen Frames which we illustrate are simply strips of wood so grooved to fit each other that when placed at right angles they form a corner with a very neat finish, and can be adjusted to fit any window by sliding the strips upon each other to the desired size, thus doing away with mitering or squaring, and also any use of corner irons, so that any person by purchasing these strips of his hardware dealer can be his own carpenter and with very little cost fit his entire house with screen frames, which are an acknowledged luxury.



THE STUART WINDOW SCREEN FRAME.

These frames have but recently made their appearance, but have sold to an extent that warrant their general use, as they are so simple to construct that any lad of ten years can do the fitting.

The strips are finished in black walnut stain, and come nicely packed in cases with bead to attach screen cloth furnished with each set.

Illustrated circulars will be furnished on application to the manufacturers, E. C. Stearns & Co., Syracuse, N. Y., or of H. H. & C. L. Munger, 142 Lake street, Chicago.

LUCADOE & HAGAR, Charleston, W. Va., want to correspond with firms who make stove patterns.

[CONTINUED FROM PAGE 321.]

pure brown ore of a different formation, within 5 miles and on the same line of road.

The access of the town by river to the great cotton field already alluded to (the river splitting it from end to end) assures an abundant and cheap supply of this material.

In addition, the supply of long leaf pine and hardwood on the coal lands lying north of the city is immense, making this point especially adapted to all manufactures of wood from long leaf pine flooring to plows,

having on it a vein of fine red ore over 16½ feet thick, besides other valuable tracts.

A 100-ton coke furnace will be erected here in the very near future; this is assured beyond a doubt.

The company is prepared to offer liberal inducements to all sorts of manufacturing enterprises, in the way of sites and otherwise.

J. W. CASTLEMAN.

Heavy Economist Planer and Matcher.

The Economist Planer, which Messrs. Frank & Co., of Buffalo, N. Y., have been

quality of hammered crucible steel, and run in bearings lined with the best Babbitt metal. The lower end of matcher spindles run in their patent self-oiling boxes.

Every part of this machine can be reached without getting into or under it. For ease and convenience of adjustment from one kind of work to another this planer, the manufacturers say, has no superior.

This machine will plane 24 inches wide and 6 inches thick. The tight and loose pulleys are 12 inches in diameter, and should make from 900 to 1,000 revolutions per minute.

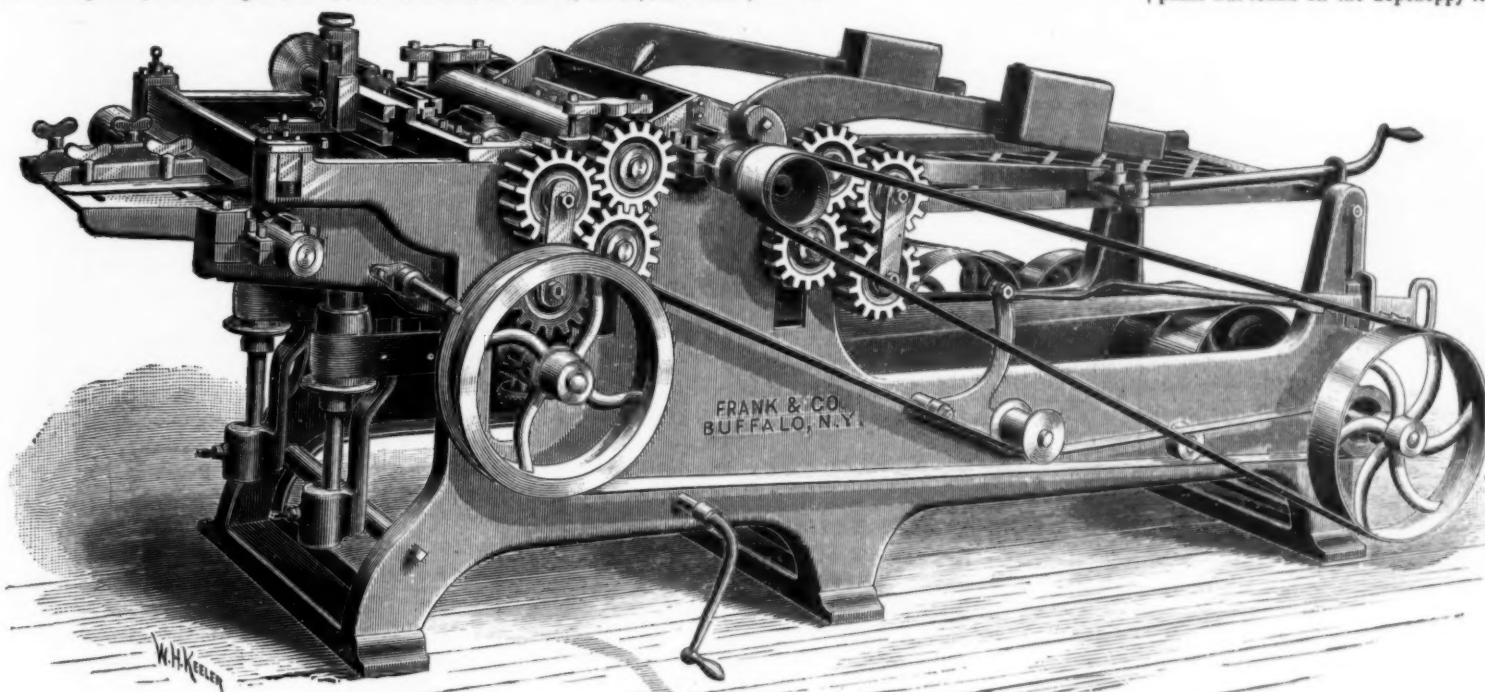
simplicity of construction, beauty, and strength; and can be operated with ease by small children in the swing. The swings are nicely painted and present a very attractive appearance on the lawn. For further particulars and prices address the F. F. Adams Co., Erie, Pa.

Phosphates in Florida.

CRAWFORDVILLE, FLA., March 29, 1887.

Editor *Manufacturers' Record*:

About two years ago the presence of phosphate was found on the Sopchoppy river in



HEAVY ECONOMIZER PLANER AND MATCHER.

agricultural implements, furniture and cabinet work.

In the above summary principal reference has been had to manufacturing. The commercial advantages of the place are equally evident. The Warrior river flowing into the Tombigbee bisects the cotton district of the State which derives its breadstuffs almost entirely from abroad. A railroad, now in course of survey and to be constructed immediately, (the Tuscaloosa Northern,) will connect us with the Georgia Pacific and also with the Kansas City Railroad, at a distance of about 40 miles. Over these roads, especially the last, will come to us the cheap grain and meat of the West to be distributed by river to the cotton belt in return for their vast cotton trade, for, under the present conditions of Southern agriculture, the point furnishing the supplies controls the trade.

In a word, Tuscaloosa has all the advantages which Birmingham possesses in the way of cheap raw materials, and is in addition thereto a healthy, well-drained location, and an established town of unsurpassed school, church and social advantages; a river navigable now 7 months in the year, (or longer than the Ohio from Pittsburgh down,) and easily to be made navigable all the year. (An outlet to the entire sea coast of the United States, once the isthmus is opened, unaffected by inter-State commerce bills.)

To take advantage of and to assist in developing these unequalled natural advantages, the Tuscaloosa Coal, Iron & Land Co. has been formed. It owns about 4,600 acres of suburban lands in and around Tuscaloosa, having a river frontage of over 1½ miles and a railroad frontage of about the same extent. In addition to this it owns about 43,000 acres of fine coal and iron land, the coal lands lying principally north from the city, between the town and the Georgia Pacific Railroad and on the line of the Tuscaloosa Northern Railway, and northeast on the line of the route of the Mineral Railroad—a branch of the L. & N.—which will, beyond question, be built to this place in the near future, and all being in the area referred to in the quotation from the State geologist's report. Its iron lands include a very valuable body, lying immediately on the Alabama Great Southern Railroad, at Vance's Station,

making for the last thirteen years, is a very popular machine, as is demonstrated by the fact that they have built and sold upwards of 1,100 of this pattern of planer. It is, however, too light for many kinds of work, and so Messrs. Frank & Co., to meet the demand for a heavier machine of this style and construction, have recently built the machine of which the accompanying cut is a representation. It is 2½ times heavier than the old style of Economist. The frame is much

The Adams Swing.

The Adams swing shown in the cut is constructed on original mechanical principles, and the frame is so interlocked as to be prevented from sagging, even if the bolts are loose. There are two sizes manufactured, adapted for both lawn or parlor. No. 1, or largest size, has standards nine feet ten inches long, with a spread of about nine feet, and five feet in width. The frame



THE ADAMS SWING.

longer, which admits of using longer driving belts. This machine has four 5-inch feed rollers, all heavily geared. It planes both sides and matches or joints edges at once. It has an extra head, slotted, four-sided, for working novelty siding, beading, and sticking all mouldings where the cut is not over 1½ inches deep; such mouldings as can be partly worked by the side-cutters it works deeper. The upper cylinder is driven by two pulleys, one on each end; the under cylinder is driven by one belt. The cutter-heads have spindles made of an extra fine

work is so constructed that by taking out two bolts the standards will close up, and by taking out the bolts of the two cross pieces the frame can be closely folded ready for shipping. The swing can be put up, or taken down, ready for packing, in ten minutes. The weight of the swing is a little less than one hundred pounds. It is very strong, having been tested by four men whose weight aggregated over eight hundred pounds. The No. 2, or parlor size, has standards about seven feet long, and otherwise proportioned in size, weighing less than seventy-five pounds. They combine

this county. Prof. John Kost, State Geologist, had his attention called to the matter and he made a preliminary examination, and the result has been the finding of an immense deposit lying along both Sopchoppy and Ocktoconee rivers for a distance of more than 35 miles. There have been several analyses of the material made, which have shown that the deposit is very rich in phosphoric acid. I leased 17,000 or more acres of land, and a company with a capital stock of \$200,000 will be organized in a few days to work the mines.

W. T. DUVAL.

THE business men who are at the head of the enterprises organized for the development of Florence, Ala., believe in letting the world know what they propose to do, and so they take the best method of accomplishing that by advertising in the *MANUFACTURERS' RECORD*. Florence is a most beautiful town, charmingly located in a magnificent agricultural region, and at the same time surrounded by immense mineral and timber wealth. It is undoubtedly destined to be the seat of extensive manufacturing enterprises, and during the last few months a number of important iron and other industries have been organized there. Our readers will find the advertisement to which we have referred of interest.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises, and needing machinery or supplies of any kind, will find it profitable to consult the advertising columns of the *MANUFACTURERS' RECORD*. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

[CONTINUED FROM PAGE 323.]

Greensboro.—F. Steed has been prospecting with a view to erecting an ice factory.

Greensboro.—S. J. Pegram & Co. have incorporated to manufacture and sell tobacco. Their paid-up capital stock is \$13,800.

Goldsboro.—The contract to build the water works, previously reported, has been received by Moffet, Hodgkins & Clark, of Watertown, N. Y. They will commence work within 30 days.

King's Mountain.—The Carolina Iron Co., of Pittsburgh, Pa., are erecting machinery to develop mines.

Monbo.—J. Sidney Troutman has purchased an old mill and will refit it with flour mill machinery.

Mount Mourne.—Harris & Co. have purchased machinery for a saw mill.

Morehead City.—The Raleigh Street Railway Co. will, it is said, build a short street car line.

Pittsboro.—A new building will be erected by the trustees of the Pittsboro Academy.

Shelby.—A brick-yard has been started by C. Fromm.

Shelby.—The contract for the wood-work of the cotton factory, previously reported to be erected by Messrs. Miller, Blanton and others, has been let to M. E. Rudisill. About \$25,000 of machinery have been purchased.

Wilmington.—J. C. Stevenson and others contemplate starting a steam cracker factory and want information as to the kind and cost of machinery.

Winston.—It is reported that a company will be organized to build gas works.

Winston.—The name of the company reported last week as to be organized to erect an electric light plant is the Winston Electric Light & Motive Power Co. The capital stock is \$30,000. D. H. Starbuck is president and D. P. Mast, secretary and treasurer.

SOUTH CAROLINA.

Charles'on.—The Berkeley County Land & Stock Co., capital stock \$10,000, has been incorporated with Samuel Langley as president.

Dudley.—W. R. Massey will rebuild his gin, reported last week as burned.

Fork Shoals.—The Fork Shoals Manufacturing Co. have purchased considerable new machinery for their cotton factory.

Laurens.—At a recent meeting of citizens a committee was appointed to secure subscriptions to the capital stock of a company to build a cotton factory. The capital stock is to be not less than \$100,000.

Mount Pleasant.—F. Muench, of Charleston, and others, contemplate starting a canning factory.

Sumter.—Two propositions to build water works have been received, and are being considered by the city council.

TENNESSEE.

Athens.—The Athens Mining & Manufacturing Co., capital stock \$1,000,000, has been organized with R. L. Bright as president; A. C. Robinson, vice president; John L. Young, secretary, and R. J. Fisher, treasurer and general manager. The company have secured 1,000 acres of land and proposes to spend \$500,000 in building three large cotton mills, a large woolen mill, water works, a \$40,000 hotel, a \$10,000 school building, &c.

Bolivar.—A planing mill will be built three miles from Bolivar by S. R. Conger, of Jackson. He has purchased machinery.

Bristol.—Sullin's Female College will erect a \$10,000 building.

Bristol.—J. A. Buffman & Co., of Boston, Mass., lately reported as contemplating erecting a planing mill, have purchased a site of three acres for their plant.

Cedar Hill.—A saw mill is being erected by B. A. Powell.

Chattanooga.—W. M. Nixon and others, reported last week as leasing and to develop the Half-Moon Island ore mines, near Chattanooga, will operate under the name of the Crescent Mining Co.

Chattanooga.—The contract to build the Episcopal church, previously reported, has been let to W. M. Cosby.

Chattanooga.—W. S. Bell, of Atlanta, Ga., and L. Mayes, H. L. Davis and Mr. Coker, of Chattanooga, have bought the saw mill of Hewitt, Parent & Wheeler, and will add some new machinery.

Chattanooga.—The U. S. Government has let the contract for building two dredge boats, and a yard will be started for the construction of these boats.

Chattanooga.—D. J. Chandler and J. F. Wright have added machinery to their brick yards to double their capacity.

Chattanooga.—The Hiwassee Railroad Co. has been chartered to build a railroad from Chattanooga to the North Carolina State line.

Chattanooga.—There is talk of a hoe and tool factory being erected.

Chattanooga.—The Chattanooga Hospital Association has been chartered by E. M. Dodson, T. Fort, A. G. Sharp, M. J. O'Brien, J. F. Loomis and Julius Ochs. They will build a hospital.

Chattanooga.—Egan & Co. are erecting brick works, and have purchased machinery.

Chattanooga.—The Fort Negley M. E. Church will erect a new building at a cost of about \$20,000.

Chattanooga.—The city will decide by popular vote on April 21 whether or not to issue the \$500,000 of bonds for public improvements recently authorized by the State legislature.

Fayetteville.—Harmes Bros. will put additional machinery in their roller flour mill, five miles from Fayetteville, and will start a large saw mill.

Knoxville.—The name of the company reported last week as being organized to build a hotel to cost about \$250,000, by F. J. Hoyle and others, will be the Knoxville Hotel Co.

Knoxville.—Henry Bruton will erect a large three-story building.

Knoxville.—A land and improvement company, with a capital stock of \$1,100,000, is being organized to improve land and aid in the starting of manufacturing enterprises.

Knoxville.—It is reported that the Acme Lumber Co., of Pennsylvania, will erect a large saw mill at Knoxville.

La Grange.—The La Grange Furnace Co. will receive proposals until April 15 for building their railroad from Danville to La Grange, previously reported.

Loudon.—G. N. Henson, of Chattanooga, is reported as contemplating the building of a furniture factory.

Maryville.—A company has been formed to build a street railroad.

Memphis.—A company has been chartered to erect an Edison incandescent electric light plant.

Nashville.—The State Anthracite Gas Co., capital stock \$200,000, has been incorporated by J. F. Wheless, G. W. Price, Walter McComb, William Porter and B. H. Stief.

Nashville.—The Georgia & North Carolina Manganese, Iron & Marble Co. has been incorporated.

Nashville.—Thomas Parkes, Rufus H. Rose, Julius Sax, Walter McComb and J. B. Morgan have chartered the Southern Car Heating & Illuminating Co., to build machines to light and heat railroad cars.

Nashville.—The Trade Water Coal Co. has been chartered by James Gaines, Louis Rosenheim, J. Sax, Adolph Blitz and Thos. Parkes. Its object is to develop coal mines, &c.

Nashville.—The People's Natural Gas & Fuel Co. has been organized with J. G. Hous'on as president, J. L. Weakley, vice-president, and E. W. Hill, secretary and treasurer. The company will begin developing lands at once.

Nashville.—Richard Douglas, O. F. Noel, C. S. Caldwell, J. E. Caldwell and Thomas Parkes have chartered the Richland Railroad Co., to build a railroad to Hillsboro. It will be 12 miles long.

Nashville.—The Spring City & Rhea Springs Street & Dummy Railroad Co. has been chartered.

Obion.—L. V. Boyle & Co., reported last week as to rebuild their burned planing mill, have commenced work and are purchasing the necessary machinery. They are also erecting a saw mill.

South Pittsburg.—The Sequatchie Hoe & Tool Co., recently reported, have let the contract to build their works to D. J. Chandler. They will be completed by July 30.

Sweetwater.—The Presbyterians will build a church to cost about \$9,000. They have bought a site, and will soon begin building it.

TEXAS.

Austin.—The Capital City Refrigerating Co. has been organized to manufacture refrigerators. Samuel W. French is president, and George A. Brush, secretary and treasurer.

Austin.—The Hepatozone Medicine Co., capital stock \$50,000, has been chartered by J. J. Tobin, W. H. Tobin and A. W. Houston.

Austin.—The legislature has appropriated \$50,000 to build an asylum.

Burnet.—Simmons Bros. and J. W. Kincaid, of Georgetown, have purchased 160 acres of marble lands 8 miles from Burnet, and will open quarries.

Dallas.—The Dallas City Gas Light Co. will spend about \$30,000 in erecting new holders and improving their plant.

Dallas.—The city will build a new reservoir.

Dallas.—A 40-ton ice factory is being erected by parties from Memphis, Tenn.

Dallas.—William Harris, P. S. Browder, James G. Garvin, E. G. Rust, R. F. Butler, B. F. Rogers and others have incorporated the Southern Mercury Publishing Co., capital stock \$50,000.

El Paso.—The Mexican Ore Co., previously reported as to build large smelting works, will shortly commence work. They will build 3 furnaces at first. The works will be known as the El Paso Smelting Works.

El Paso.—S. L. Carter, L. H. Davis and others will probably organize a stock company to erect a powder factory.

Fiskville.—L. M. Mays is developing coal lands near Fiskville.

Fort Worth.—A \$50,000 company is being organized to erect works for manufacturing car wheels.

Fort Worth.—It is stated that A. T. Biers, of Springfield, Ill., has purchased 1,300 acres of land, and will erect large works to manufacture engines, etc.

Fort Worth.—The Fort Worth Machine & Boiler Works will build new works at a cost of about \$100,000. Plans have been prepared and work will shortly begin. The foundry will be 60x100 feet, the machine shops 50x150 feet, and the blacksmith shop 40x50 feet.

Gainesville.—The name of the \$25,000 stock company recently reported as organized to build a grain elevator by J. B. Wells, F. M. Renfroe and others, is the Gainesville Elevator Co.

Galveston.—The Brazoria Land & Cattle Co., of St. Louis, Mo., are arranging to establish a large abattoir on Dickinson Bayou, 16 miles from Galveston. About \$25,000 will be invested in the plant.

Galveston.—Adoue & Lobit and others will organize a company with a capital stock of \$500,000 to build a large bagging and cordage factory.

Galveston.—J. W. Byrnes is erecting works on avenue A to manufacture pitch from coal tar.

Greenville.—It is stated that an ice factory is to be built as soon as the water works lately contracted for are completed.

Honey Grove.—A company has been organized to build a roller flour mill. Will soon commence work.

Houston.—The Houston Gas Light Co. contemplate erecting an electric light plant.

La Grange.—It is reported that a soap factory will be built.

La Grange.—J. C. Brown, J. W. White, W. S. Robertson, R. T. Bradshaw, A. T. Bradshaw and A. J. Rosenthal have incorporated the La Grange Water Co., capital stock \$50,000.

Leaky.—The Texas Mining, Manufacturing & Chemical Co. has been formed to develop kaolin mines. A. G. Vogel can probably give information.

Marshall.—A broom factory will be started by H. E. Carter and J. H. Copeland.

Marshall.—A proposition to build water works will be made by the New York Contract Co., of New York.

Marshall.—A stock company is being organized to build an opera house. The mayor can give particulars.

Rusk.—Robert Pryor is rebuilding his saw mill reported last week as burned.

San Antonio.—O. H. Tobey, of Chicago, Ill., will erect a pork packing establishment as soon as he satisfied he can secure a sufficient supply of hogs.

San Antonio.—The name of the company reported last week as being organized to erect an electric light plant, by Louis S. Berg and others, is the San Antonio Electric Light & Power Co. The capital stock is \$100,000.

Sour Lake.—P. J. Willis, of Galveston, and Frank J. Bowman, of St. Louis, will build a 10-mile railroad from the Southern Pacific Railroad to Sour Lake.

Uvalde.—The address of the Leakey Kaolin Co., reported last week as preparing to develop mines, is Uvalde, and not Waldo, as incorrectly stated.

Waco.—Messrs. Dennis, Scoville and King, previously reported as leasing the Waco Cotton Mills, will, with others, organize a \$100,000 stock company to enlarge them.

Waco.—The Waco Hotel Co., capital stock \$100,000, has been chartered by W. S. Baker, B. W. Cook, T. Fibbs, Z. T. Beasley, T. B. Barton, George Clark and others.

Wichita Falls.—A depot, machine shops, etc., are to be built by the Wichita Falls & Winfield Railroad Co. A. Forman can give particulars.

VIRGINIA.

Buchanan.—D. S. Cook, reported last week as leasing and to develop mineral lands near Buchanan, will build a short railroad to the mines and will erect ore washers.

Floyd C. H.—An axe and pick handle factory is to be erected.

Graham's Forge.—It is stated that Graham & Robinson will repair their iron furnace and put it in blast.

Graham, Tazewell county.—The Norfolk & Western Railroad Co. (office, Roanoke) will extend their road from Graham about 100 miles through the Clinch valley to meet the extension of the Louisville & Nashville Railroad from Corbin, Ky. Surveys are now being made.

Hardwickville.—The bark mills of A. N. White & Co., reported last week as burned, are being rebuilt.

Liberty.—F. A. Smith and O. C. Ruskin will build a plow factory.

Loudon county.—L. F. Palmer, J. T. Ryan and W. L. Palmer are erecting a creamery with a daily capacity of $2\frac{1}{2}$ tons of milk.

Petersburg.—The Thomson-Houston Electric Light Co. have received the contract to light the city for five years and will begin erecting a plant at once.

Portsmouth.—The Portsmouth water works have been purchased by Charles D. Ward, of Jersey City, N. J., for \$81,150. He will complete the building of the works.

Pulaski City.—Teany & Nicholson are receiving machinery to double the capacity of their brick works.

Rustburg.—William H. Ford, of Lynchburg, has recently purchased a large tract of timber land near Rustburg. He will develop it and erect a bark mill.

Salem.—The address of Mr. Tower, reported last week as purchasing the Botts iron mines near Salem, is Poughkeepsie, N. Y. It is stated that he contemplates building an iron furnace at Roanoke.

Speedwell.—James A. Walker, of Wytheville, and George T. Mills, of Philadelphia, Pa., have purchased the mineral rights of about 800 acres of land near Speedwell and will develop it.

Van Buren Furnace.—Frank King will sell a two-third interest in his Van Buren Furnace property to Pittsburgh capitalists. They will develop the manganese ores and change their furnace to a ferro manganese furnace.

Virginia.—Bills have been introduced in legislature to incorporate the Holston Steel & Iron Co.; the Falls Church & Potomac Railway Co.; the Holston Manganese & Iron Co.; the Rockbridge Co.; the Roanoke Street Railway Co.; the Virginia Steel Co.; the New York & Southern Construction Co.; the Chesapeake Oyster Culture & Reclamation Co., with a capital stock of not less than \$25,000 nor more than \$500,000; the Metropolitan Quick Transit Co., with T. C. Williams, E. Y. Cannon, N. W. Bowe, James B. Pace and James H. Dooley, of Richmond, and others as incorporators, and a capital stock of not less than \$100,000 nor more than \$600,000; the Virginia Mining Improvement Co.; the Bland County Railroad Co.; the Shenandoah Land & Anthracite Coal Co.; the Round Mountain Mining & Manufacturing Co.; the Blue Ridge Mineral Co.; the Kentucky, Virginia & Tennessee Coal & Mining Co.; the Sandy River Mercantile & Manufacturing Co.; the Metropolitan Quick Transit Bridge Co.; the Richmond Railway Connection & Wharf Co., with A. S. Buford, W. N. Ruffin, John G. Friend, W. R. Ruffin, H. W. Flournoy, R. F. Mason and H. Hairston as incorporators, and a capital stock not exceeding \$3,000,000; the West Norfolk & North Carolina Railroad Co.; the New South Cigar Works Co.; the Virginia & Tennessee Coal & Iron Co., to mine coal, iron ore, marble and other minerals. The incorporators are G. V. Litchfield, James C. Greenway, O. Barrett, Jr., T. P. Trigg and W. J. Brown, and the capital stock is to be not less than \$100,000 nor more than \$5,000,000; the Warren Springs Improvement Co., and the Lyon Manufacturing Co.

Warrenton.—Bayley & Co. will rebuild their distillery, reported last week as burned.

West Point.—The contract to build dykes in the Mattaponi river has been awarded to D. A. Gillies, of Baltimore, Md.

WEST VIRGINIA.

Harrisville.—The Harrisville, Grantsville & Charleston Railway Co., capital stock \$25,000, has been chartered to build a railroad from Harrisville to Charleston, by Thomas E. Davis, J. M. Heaton, Romeo H. Freer, J. M. Hall, M. P. Morris, W. A. Strickler and others.

Monroe county.—Thomas F. Suthers, of Tazewell C. H., Va., has purchased 800 acres of land on Brush creek, which will be developed for its petroleum.

Wheeling.—The LaBelle Pottery Co., capital stock \$80,000, has been organized by George K. Wheat, W. A. Isett, E. M. Pearson, J. N. Vance, N. L. Hearne and others. They have purchased a site and will at once build large pottery works, 5 stories, 100x300 feet.

Winfield.—The tobacco factory of Middleton, Dudding & Roberts is being enlarged.

BURNED.

Alma, Va.—The saw and flour mill of Adam Seekford.

Bossier, La.—The gin of J. S. Swann.

Camilla, Ga.—The saw mill of Collins & Boynton.

Catlettsburg, Ky. (near)—The saw mill of Corcoran, Richardson & Co.; loss \$20,000. Reported that it will be rebuilt.

Columbia, S. C.—The saw mill of T. E. Rawls, 20 miles from Columbia, damaged by a boiler explosion.

Gainesville, Texas.—The planing mill of J. B. Buckley; loss \$4,000.

Leitchfield, Ky.—The whiskey distillery of W. R. May; loss \$20,000.

Louisa county, Va.—The steam saw mill of Mr. Watson.

New Found, N. C.—The saw and grist mill of Abner Rhodes; loss \$1,500.

Pointe Coupe Parish, La.—The Lorio sugar house.

Pulaski, Ga.—The saw and grist mill of J. L. Anderson.

Thompson Station, Tenn.—The gin of W. D. Larinder.

Waldo, Ark.—The saw mill of Simmons & Ferguson.

To Build a Bridge.

ROME, GA., March 30, 1887.

Editor Manufacturers' Record:

The contract for Oostanaula bridge was let to Atlanta Bridge & Axle Co., with guarantee to be completed by August 1.

J. L. Boss, Sec'y.

Steam Brick Works.

FLORENCE, ALA., March 29, 1887.

Editor Manufacturers' Record:

We are putting up a steam brick machine; capacity, 35,000 brick per day.

LEFTWICH & SAMPLE.

Building 150 New Coke Ovens.

WOODWARD, ALA., March 28, 1887.

Editor Manufacturers' Record:

We are opening new coal slope and building 150 new coke ovens.

WOODWARD IRON CO.

Will Start an Iron Foundry.

FINCASTLE, VA., March 31, 1887.

Editor Manufacturers' Record:

I have purchased an engine and foundry outfit which I will start as soon as I can get ready.

O. M. BOWYER.

Ice and Refrigerator Manufacturing Company.

FORT SMITH, ARK., March 28, 1887.

Editor Manufacturers' Record:

Our company is an incorporated company with fifty thousand capital, and we will get to work as soon as money can start it.

JNO. MATTHEWS, Pres.

PHILADELPHIA, PA., April 2, 1887.

Editor Manufacturers' Record:

I propose starting at Okahumpka, Florida, an establishment for the manufacture of buckets, tubs, tanks, measures, &c., and invite correspondence with parties wishing to become interested, or having machinery for that purpose.

R. H. RAMSAY.

The Immense Iron and Steel Works to be Built at Baltimore by the Pennsylvania Steel Co.

No time is being lost by the projectors of the steel plant enterprise so recently inaugurated at Holly Grove and Sparrow Point, on the Patapsco, some 10 miles below Baltimore. The Pennsylvania Steel Co., in connection with Mr. J. Wesley Guest and Mr. Jacob H. Taylor, of this city, are preparing to make the old pleasure resort and Sparrow Point farm the site of one of the most extensive steel industries in the country. Of course, time is required to fully develop a large steel plant turning out rails, plate and every variety of steel called for in commerce and manufactures. Including the civil engineers and their assistants, there are at present 30 or 40 men engaged surveying and in the execution of preliminary work necessary to start such an enterprise. Arrangements have been made to manufacture brick on the ground to erect buildings and furnaces, and there is no doubt that during the present year two or three furnaces will be completed and in operation, each having a capacity of 200 tons daily, so that at as early a day as possible the large quantities of foreign ore landed here can be transferred directly from the steamships to the mouth of the furnaces. At present the foreign ores arriving at Baltimore and Philadelphia undergo several "handlings" before reaching a furnace. The advantages obtained at the projected new plant are seen at a glance. While the furnaces to be built this year are in operation the work of erecting buildings and machinery for the manufacture of all kinds of steel will be in progress, so that eventually in the course of time, and not a long time either, Holly Grove and vicinity will be the site of a good-sized manufacturing town. The Pennsylvania Steel Co. and other capitalists of Pennsylvania, as well as some of Baltimore's moneyed men, have entered into this enterprise with the view of extending the works as far as unlimited capital and the demands of the trade will warrant, and now that the government will build steel cruisers, gunboats, etc., the company locating at Holly Grove will be able to compete successfully with any other like establishment in the country. The site, comprising a thousand acres, has a water front of $3\frac{1}{2}$ miles, three sides of the square binding on the river and inlets, along which will be erected wharves, piers, etc., giving ample dock room for vessels of deepest draft after the dredging is completed. The company own several vessels and are chartering others constantly to transport ores from Cuba, where the Pennsylvania Steel Co. and the Bethlehem Iron Co. have large interest in the Juragua Iron Co., engaged in mining the ores referred to.

As stated last week in the MANUFACTURERS' RECORD, the company will construct a railroad to connect their works at Holly Grove with the Northern Central, Baltimore & Ohio, Philadelphia, Wilmington & Baltimore and the Western Maryland Railroads. The gauge will be uniform, so that cars of either and all the roads named can run immediately to the works, thus again doing away with handling necessary in making transfers.

It has not yet been announced what the capital stock will be, neither have the officers been named, but there is an abundance of money back of this great enterprise. As already stated, it is an undertaking of the Pennsylvania Steel Co., one of the greatest steel concerns in the world. Mr. J. Wesley Guest, cashier of the Citizens' National Bank, of Baltimore, and Mr. Jacob H. Taylor are also engaged in the enterprise. Mr. Taylor is the senior member of the firm of Taylor & McCoy, Gallitzin, Cambria county, Pa., and of Glen White, Blair county, Pa., extensive miners of coal and manufacturers of coke. This firm has recently made large acquisitions of coal lands, which gives them a total of 4,000 acres at the Gallitzin and Glen White works, and in view of the steel plant to be erected at Holly Grove some 300 new coke ovens will be built at an early date, thus increasing the number of ovens at the two plants to upwards of 500. Mr. Taylor is an old Baltimorean, and has other large coal and lumber interests, with his headquarters in Baltimore.

Bids for Building Bridge Wanted

HANDSBORO, MISS., March 28, 1887.

Editor Manufacturers' Record:

I should like to correspond with bridge builders. Want estimates on a bridge (with draw), iron or wood, over stream 300 feet wide. Cost of lumber to be used in construction not to be considered.

C. M. LIDDLE.

Improving Gas Works.

COLUMBIA, S. C., April 2, 1887.

Editor Manufacturers' Record:

We are erecting new water gas apparatus to duplicate one already in use, of Lowe's patent.

JOHN M. DANIELS, Agt. & Supt.

Oil Mill to be Built.

ANNISTON, ALA., March 30, 1887.

Editor Manufacturers' Record:

A cotton-seed oil mill company is being organized in Oxanna to be run in connection with the planing mills of Barry & Draper, already there. They will also run a gin and soap works. The movers in this enterprise are C. C. Hackaber & Co., real estate agents there. Mr. Hackaber has the cotton-seed oil machinery already at Newbern, Ala., which he proposes to move. The capital stock of the company will be \$30,000.

W. D. SNOW.

Machinery Wanted.

CALERA, ALA., March 30, 1887.

Editor Manufacturers' Record:

Please give me address of parties handling machinery for making wheelbarrows.

WADE ALLEN.

Erecting Electric Light Plant.

GADSDEN, ALA., April 2, 1887.

Editor Manufacturers' Record:

We are erecting electric works as fast as wire and plant arrives. Have small plant up until the 25-light dynamo arrives.

F. W. HORNE.

Machinery Wanted.

GRIFFIN, GA., March 30, 1887.

Editor Manufacturers' Record:

I wish to purchase gins and press for ginning and packing cotton, with capacity of 30 bales per day, with all the latest improved conveniences.

M. L. BATES.

Information Wanted.

WILMINGTON, N. C., March 31, 1887.

Editors Manufacturers' Record:

It is in contemplation by some capitalists of our city to establish a steam cracker bakery, and I desire to be put in correspondence with some reliable expert so that I may get the following information: What machinery would be necessary to equip a first-class bakery of the capacity of 15 barrels flour a day to make loaf bread for city trade, to make soda, milk, pilot, oyster, butter, boston tea, cornhills, lemon wafers, jumbles, &c. Will also want to buy necessary machinery.

J. C. STEVENSON.

Contemplate Erecting Ice Factory.

NEW IBERIA, March 29, 1887.

Editor Manufacturers' Record:

A national bank with a capital of \$50,000 will begin operations on May 1st. Messrs. Gebbert & Sons contemplate erecting a large ice factory to be run in connection with their large shingle mill. Two stock companies were formed last week, with capital stocks at \$15,000 and \$20,000, to build two handsome opera houses.

J. P. SUBERBILLE.

[FOR OTHER LETTERS SEE PAGE 338.]

MINING NOTES.

By T. K. BRUNER, Raleigh, N. C.

DUNN'S MOUNTAIN MINE.

This property is situated about four miles east of the town of Salisbury, in Rowan county, and lies on the west side of the granite axis which runs across the State in a southwesterly direction. The property has been worked, more or less, for thirty or more years, and at one time was productive. For several years it has been idle, which, it is claimed, was the result of mismanagement. Recently, Superintendent Jas. C. McCannless has resumed operations, and it appears, with favorable prospects. He is now operating a ten-stamp mill on ores considered heretofore too poor for profitable treatment. He claims to be getting a fair pay ore from the refuse dumps. The results reported are rather startling, and are said to be due to the introduction of some new machinery and increasing painstaking on the part of the management in the manipulation.

William F. Buckley, Esq., of New York, is the owner, and has been on the property for some weeks giving his personal supervision to part of the work. He made an accurate account of operations for ten days. The discarded material, alluded to above, was worked with an average result of \$22 to the ton. This shows how easy it is to be mistaken in ores. This proves that the ores thrown out were very nearly as good as those worked some years since. True, the action of sun and rain have put the ores in better condition for milling and amalgamation, but this cannot account for such an increased average value as the test shows. This discovery will increase the amount of ore in sight and may result in extending the work to much larger proportions.

SUCCINITE.

or *succinum*, as the Romans called it, has been found in Duplin county, this State. Specimens have been sent to the Department of Agriculture for analysis, by Mr. J. B. Carr, a farmer. They were found in the marl and phosphate beds, but, as yet, in no great quantity. Succinite, or amber, is a fossilized gum, which exuded from trees belonging to past epochs. These trees are now found in the strata of bituminous wood beneath the overlying formations of sand and clay. This mineral is reported in the second chapter of Kerr's Geology of North Carolina as being found in "lumps of several ounces weight in Pitt county and elsewhere, in the tertiary marl beds of the eastern counties." This is the first mention of its having been found in Duplin. The remarkable part of it is that no wood of the ancient tree from which the amber gum exuded has yet been found, or at least identified, in the tertiary formation of the State. It is, however, found in other Atlantic States, occurring in the green sand formation, and sometimes associ-

ated with lignite. It is not improbable that the mining for phosphates in this State may uncover larger and more valuable deposits of amber than has yet been found.

MINOR NOTES.

Prof. J. B. Kellebrew, Ex-Commissioner of Agriculture, of the State of Tennessee, has been prospecting in some of the western counties of this State in the interest of capital from his State. He has been in Buncombe, Yancy, Madison and Mitchell, among other counties, and is pleased so far with his explorations.

The Marion Bullion Company have been rather backward in their McDowell operations during the past few months. It is stated, however, that they will resume with brighter prospects with the coming warm weather. There are energetic men comprising the company, and something practical may be expected from them. Their headquarters are at Harrisburg, Pa.

Foliated gypsum has been found in Bladen county, near Elizabethtown. It occurs in beds, but is hardly of sufficient purity to make plaster of paris, but is excellent as a fertilizer for certain soils.

Colonel Leventhorpe, of Patterson, Caldwell county, has found molybdenite—molybdenum sulphide—in his vicinity. It occurs in thin foliated plates, greatly resembling graphite. Its composition is sulphur and molybdenum, in nearly equal parts; it occurs in the older, or igneous rocks.

The Cid Mine is reported as sold again. The property is in Davidson county and is but partially developed. Some good material has been found there, but the property has produced but little; whether this is attributable to mismanagement or to barren ore does not appear. It is more than probable that to the former cause much of the failure is due.

To Lumbermen—Wanted!

A party who controls a Portable Saw Mill, Lath and Shingle Machine to cut out large quantities of Georgia yellow pine, live oak, cypress, etc., in the streets of the new seaport city known as Naval City, Ga.; on salt water and located opposite Brunswick, Ga. All timber, stumpage, etc., can find a near market and cheap labor. Will give the timber, etc., for the work. Address S. C. LITTLEFIELD, President Seaboard Land, Improvement & Manufacturing Co., at Brunswick, Ga. Full particulars can be learned by early application. A splendid site for a Saw Mill donated.

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Attention of Capitalists and Manufacturers is called to the numerous advantages existing at Fort Scott, Kansas, which will soon make this city one of the most important manufacturing and commercial points in the West, and enable it to maintain its present supremacy over all other cities in this State. The natural facilities are unequalled. Coal of the best quality is sold at \$1.50 to 2.00 per ton; slack, 50 cents to \$1 per ton, delivered. Abundance of stone and brick, best quality. Natural gas is fully developed, and used for all purposes. Facilities for transportation and distribution are unequalled, being already the junction of five trunk railways. Direct communication with lumber regions of Mo. and Ark. Correspondence solicited.

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The South Pittsburg City Company has decided to begin the sale of their manufacturing, business and residence lots on

TUESDAY, MAY 10, 1887.

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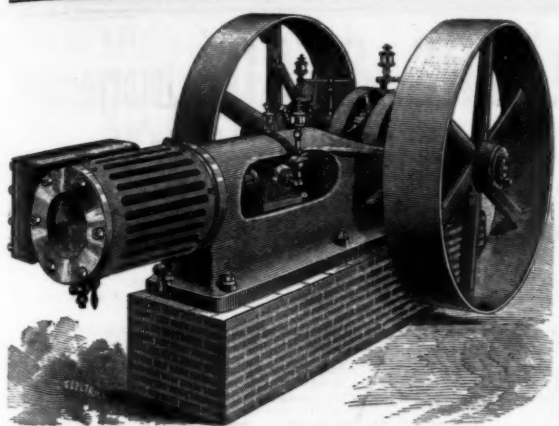
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Brush Electric Light Co., Baltimore, Md.

Ettick, Matoca and Battersea Mfg. Co's.,

Petersburg, Va.

Rasin Fertilizing Co., Baltimore, Md.

Tanner & Delaney Engine Co., Richmond, Va.

Sibley Mills, Augusta, Ga.

Graniteville Mfg. Co., Graniteville, S. C.

Charleston Bagging Co., Charleston, S. C.

P. H. Mayo & Bros., Richmond, Va.

Phosphate Mining Co., Beaufort, S. C.

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bus, Ga.

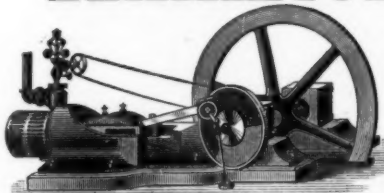
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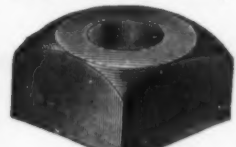
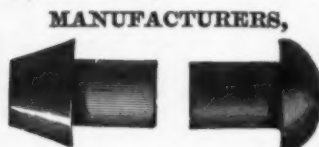
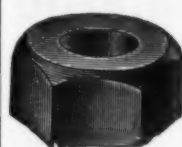
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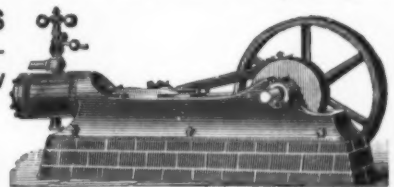
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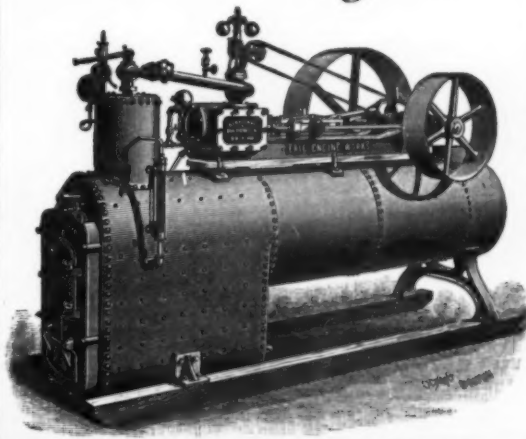
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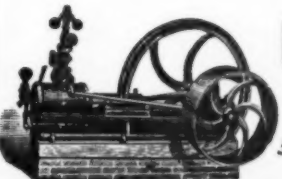
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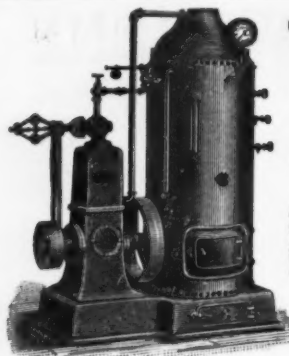
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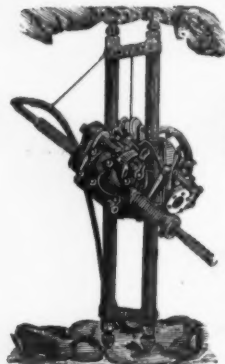
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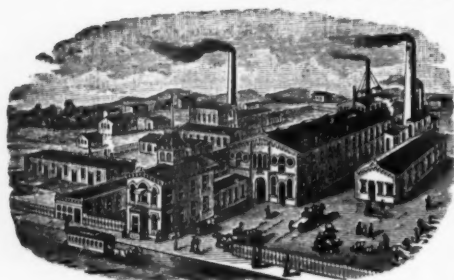
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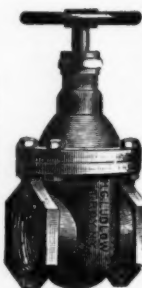
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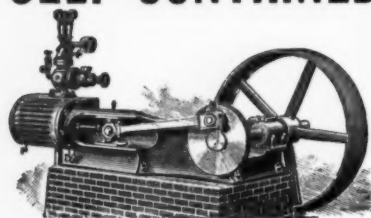
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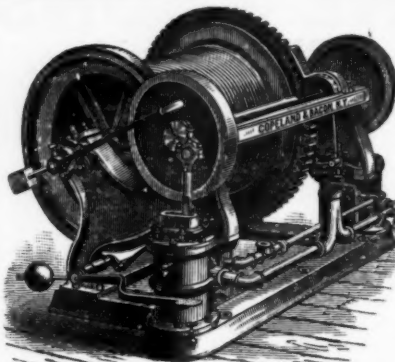
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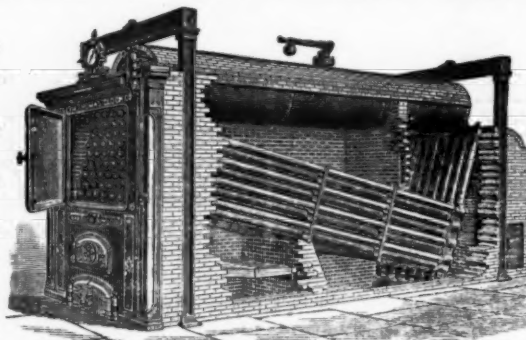
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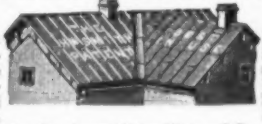
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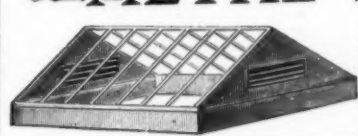
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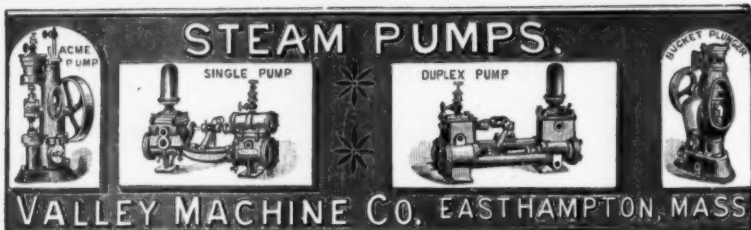
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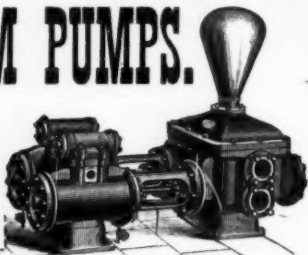
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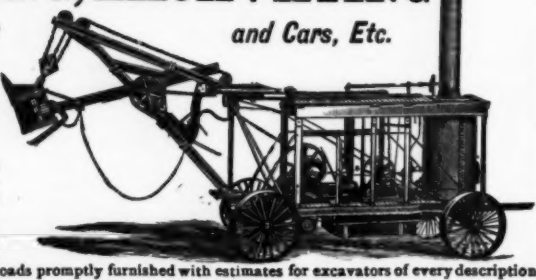
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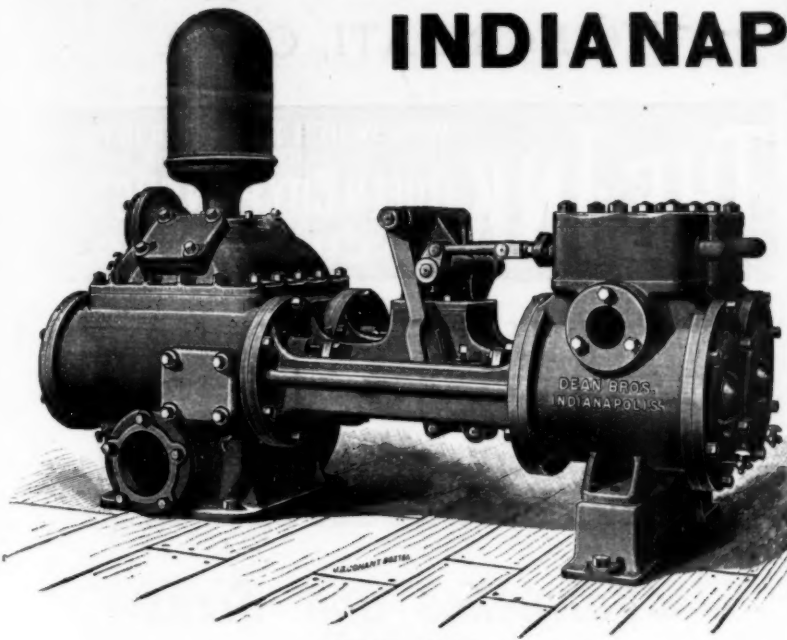
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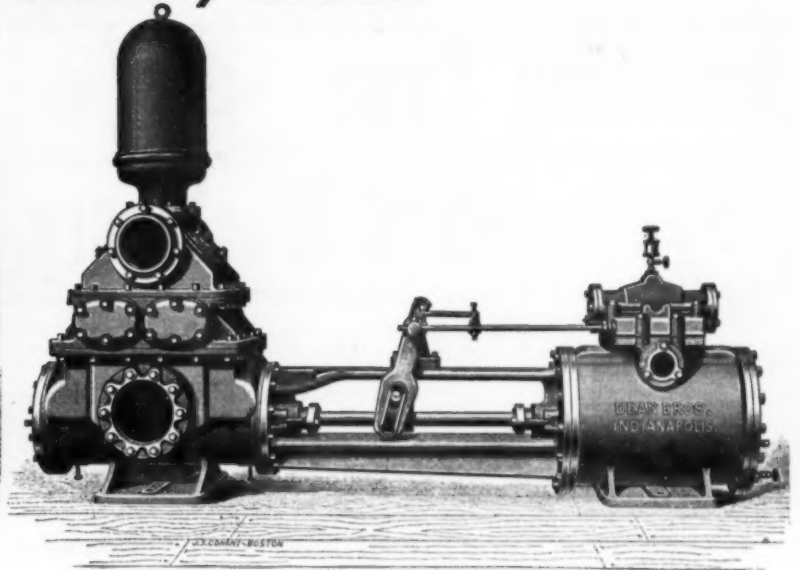


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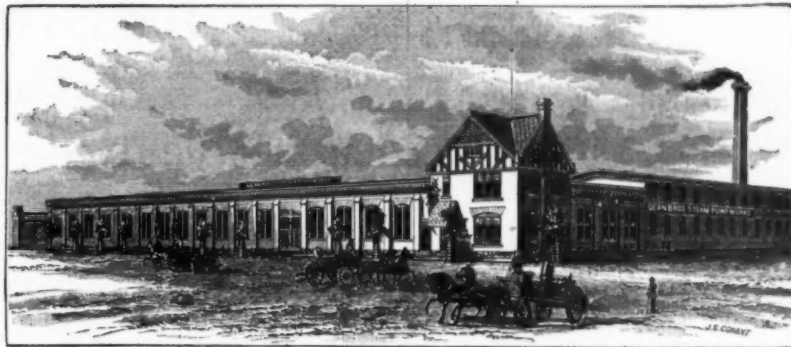


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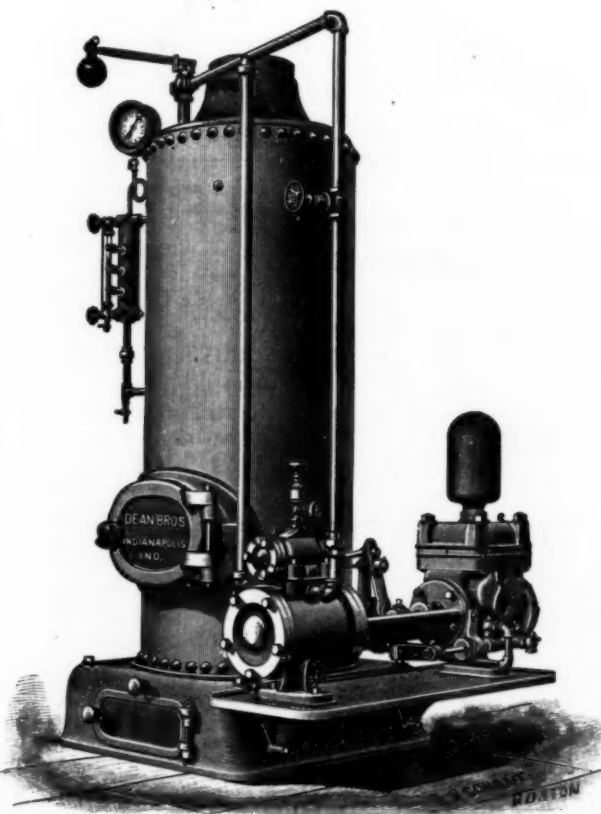
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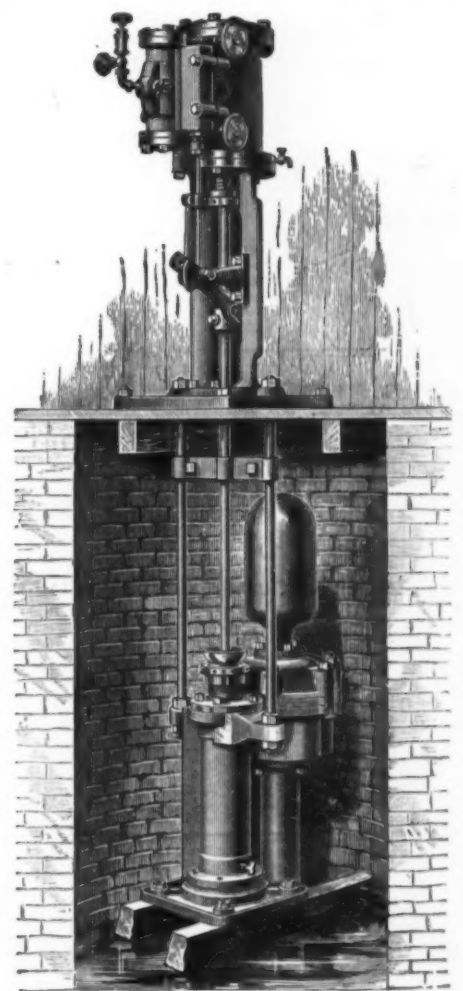
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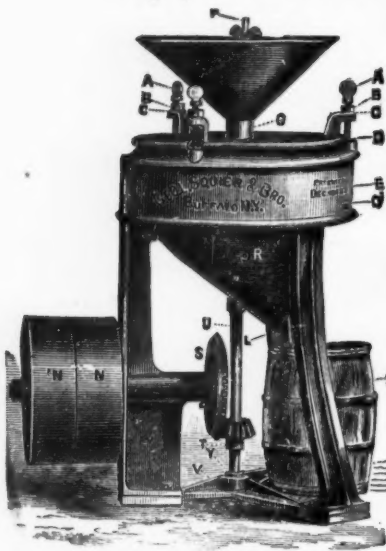
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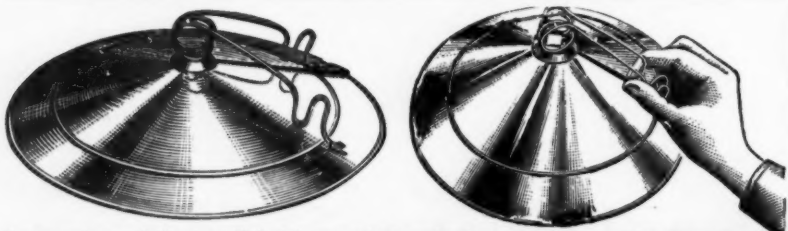
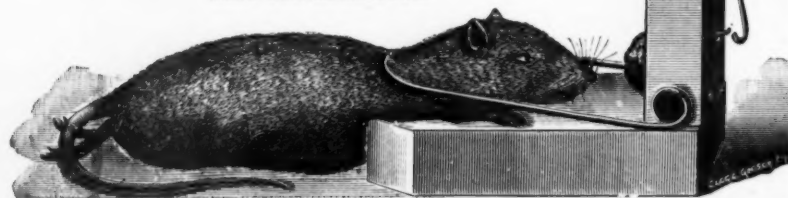
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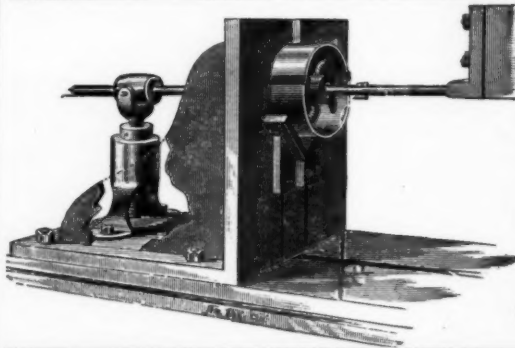
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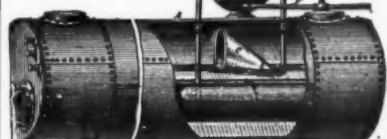
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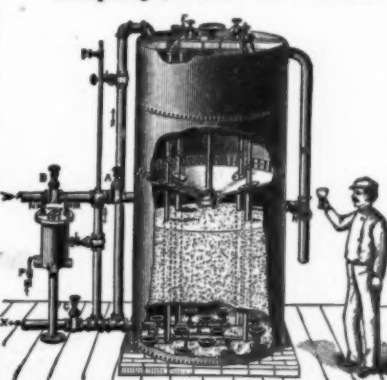
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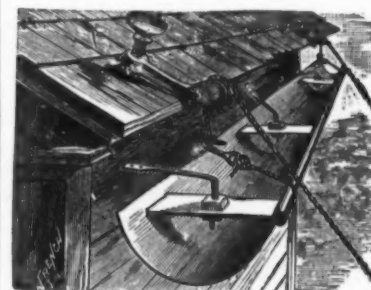


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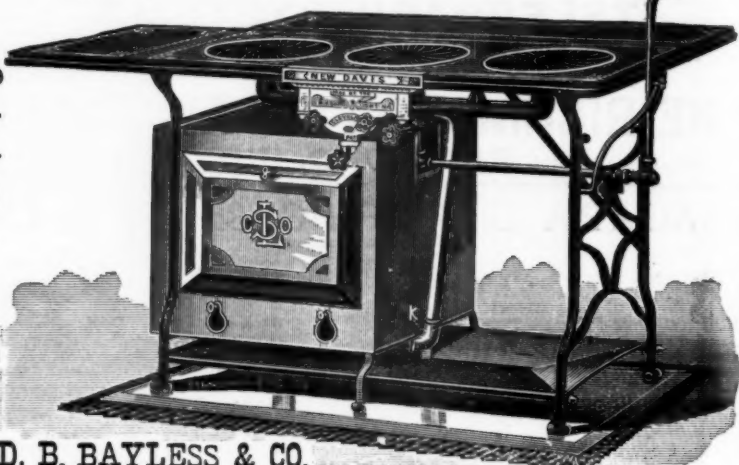
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WITH The Original Steel Frame and Automatic Safety Lighting Device. All others follow as imitations. Buy none but the Original. Made in a full line of sizes, with ovens above or below. The Oven on the "NEW DAVIS" RANGE is the largest placed on a Vapor Stove. Is supplied with Two burners and an Automatic Lighting Device. The burners light from the outside.

The Steel Frame Saves Breakage! Saves Freight! Saves Expense! Saves Annoyance! Burners are Simple, Powerful and Economical, and light like Electricity.



D. B. BAYLESS & CO.

CINCINNATI, OHIO.

Agents for "THE NEW DAVIS."

THE STANDARD LIGHTING CO.

Perkins Ave. and
C. & P. Ry.

Cleveland, O.

PORTABLE and STATIONARY ENGINES and BOILERS.

Hunt Dogs Clamp Both Upper and Under Side of Log.

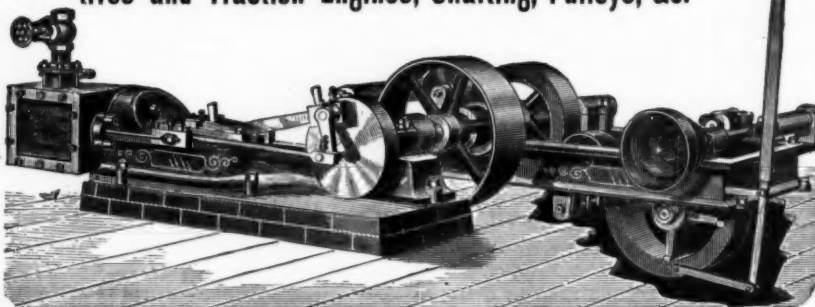
FIVE SIZES BELT MILLS.

Four Sizes Direct Attachment Saw Mills

THREE STYLES

First Class Sets.

Spoke and Handle Lathes, Cowles' Patent Pole Road Locomotives and Traction Engines, Shafting, Pulleys, &c.



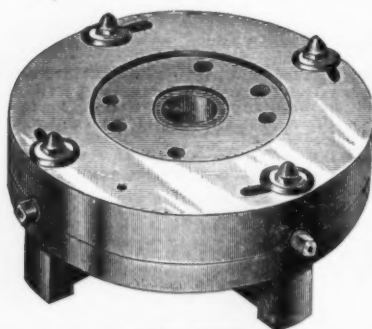
DIRECT ATTACHMENT
SAW MILLS
Are No Experiment.

Mills built at this shop twenty years ago are running to-day, and we can furnish numerous testimonials proving that for the manufacture of lumber on a moderate scale, they are unequalled by any belt mill made. Our carriages are all iron except the feed rack bars. We give our customers their choice of Three First Class Sets. The Hunt Dog clamps both upper and under side of log. All of our mills have Log Turners, Sawdust Elevators, Log and Lumber Cars, Cant Hooks, Wrenches, Etc. We give more for the money than any concern in the country.

SEND FOR ILLUSTRATED CATALOGUE.

Spangenberg, Pendleton and Company, WARREN, OHIO.

NEW PATENT COMBINATION LATHE CHUCK.



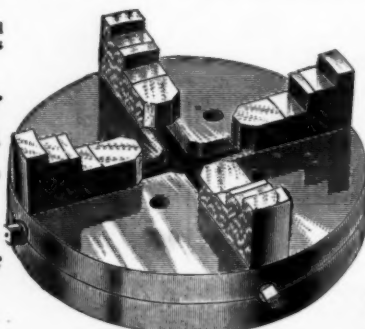
BACK VIEW.

This Chuck is constructed upon the same general principles as the well-known

Horton Chuck

with the additional feature that it can be used either as an

Independent,
Universal Concentric
or Eccentric.



FRONT VIEW.

Warranted to be the Strongest, Most Accurate, and Easily Operated Combination Chuck in the market.

TRADE MARK:

The Horton Lathe Chuck.



VIEW OF WORKING PARTS.

Manufactured by THE E. HORTON & SON CO., WINDSOR LOCKS, CONN., U. S. A. Send for Illustrated Price-List.

TRADE NOTES.

A NEW USE FOR GRAPHITE.—John A. Walker, secretary of the Dixon Crucible Company, sends us the following: "From time immemorial steam and gas fitters have used red lead in making joints and connections. It has been a matter of tradition with them that nothing else could possibly answer as well. However, after a few months have passed it is found that the red lead was 'set,' and it is next to impossible to open a joint. The fitter applies his tongs with all his strength, and, in a large percentage of cases, the joint is finally broken, and the tongs sprung, sometimes almost beyond repair. The progressive fitter has found that graphite (black lead) carried ready mixed for the purpose, or carried dry and mixed with best boiled oil, as occasion requires, makes an infinitely better joint. Being a natural lubricant it enables the fitter to make a much tighter, and, consequently, a much more perfect joint. Further, a joint so made can remain three months, or three years, or thirty years, and will then yield to the ordinary pressure of the tongs. It will make a better joint with less leakage, and render absolutely unnecessary the breaking of joints and couplings, and the straining of tongs. The graphite should be pure and of the right degree of pulverization."—American Machinist.

MR. JOHN M. CALDWELL, of Anniston, Ala., makes the very liberal offer through our advertising columns to give 4 acres of land for a site to any manufacturing plant requiring 75 to 100 hands. The land is located $1\frac{1}{2}$ miles west of Anniston, one of the most prosperous towns in the South, and is on two railroad lines. The increase in the value of this land within a year or so will undoubtedly be very great. The advantages for manufactures possessed by Anniston are too well known to need any comments by us, and those who desire to establish a manufacturing establishment of any kind in one of the healthiest and most delightful locations in the South, will find it to their interest to correspond with Mr. Caldwell.

THE Ledbetter & Co. Land & Loan Association, of Anniston, Ala., deal in lands, stocks and bonds, and have for sale Anniston city property and mineral lands adjacent to that town. This is an incorporated company with a capital stock of \$100,000, and their references are unexcelled. Anniston is rapidly improving and land is steadily increasing in value. When the many new enterprises now actually in progress have been completed, they will more than double the population of the town, even if not another factory was established. This will naturally advance the value of property, and those who desire to invest in Anniston can secure any information desired from the Ledbetter & Co. Land & Loan Association.

MESSRS. C. W. RAYMOND & Co., large manufacturers of brick-makers' supplies, of Dayton, O., report a very large and growing trade in the South. They have recently fitted up several extensive works, besides sending their perfection brick press and wrought iron tempering wheel into nearly every community where bricks are made. Notwithstanding recent additions to their shops they are running until 9 o'clock P. M. every day.

MESSRS. RUFFIN & HAIRSTON, of Danville, Va., advertise for sale hardwood timber lands, and water power for cotton or paper mill. They have some fine tracts of hardwood timber suitable for handles, spokes, wheels, &c., and also some good sites for factories. Danville is a very thriving town, increasing rapidly in wealth and population and is a large tobacco and cotton manufacturing point. It is a good place at which to locate.

THE Geo. L. Squier Manufacturing Co., of Buffalo, N. Y., have made a great specialty of their rice hulling machinery. On their very attractive catalogue just issued, quaintly worked in on the front cover appears the statement, doubtless of interest to our Louisiana friends, that: "As in the days of Abraham, so now in Japan and Louisiana, they break the rice in mortars." They say in the introduction to their catalogue: "Until the introduction of our new improved rice machinery, the common method for fitting rice for use in all past ages has been by pounding, bruising and breaking it in mortars; and to-day you will find the mortars pounding, bruising and breaking rice in all the large rice mills of Charleston, Savannah and New Orleans. Hundreds of thousands of dollars have been expended in fruitless experiments and vain endeavors to do away with this wasteful method of cleaning rice, but aside from the system of machinery illustrated in this catalogue, we know of no method of cleaning rice in which the destructive mortars are not used. We have spent many thousands of dollars in experimenting to perfect this machinery. It has been tested on every variety of rice in every rice-growing country, and important improvements have been made from time to time, until we can now offer it, with the conviction that it is by far the best rice cleaning machinery in the world. This conviction is based upon its actual use in all the rice-growing countries of the world and the many testimonials we receive as to its merits." In addition to rice machinery this company manufacture sugar mills, evaporators, steam engines, coffee hullers and polishers, water-wheels, etc., etc. Their catalogue will be sent upon application.

THE different engine companies in this country realize that to get the best results in economy, it is necessary to have the best possible boiler setting so as to obtain the largest evaporation for a dollar's worth of fuel. Among the engine concerns in this country who have set boilers with the Jarvis boiler setting are the Harris Corliss Engine Co., Providence, R. I.; Armington & Sims' Engine Co., Providence, R. I.; Southworth Foundry & Machine Co., Philadelphia, Pa.; Ball Engine Co., Erie, Pa.; Woodbury Engine Co., Rochester, N. Y.; Erie City Iron Works, Erie, Pa.; John T. Noyes Manufacturing Co., Buffalo, N. Y.

THE CHALMERS-SPENCE CO., New York, miners and shippers of asbestos and manufacturers of boiler and pipe coverings, packing and specialties, have found it necessary to lease the building adjoining their present works, which will double their floor-space and capacity. Asbestos, owing to its incombustible nature, lightness and adaptability to various manufactures, has of late become of great commercial importance. The Chalmers-Spence Co. were the pioneers in the introduction, and the company is at present time said to be the owners of the largest asbestos mines in the world.

AN illustrated catalogue and price-list of machinery and machinists' tools has been issued by Messrs. E. E. Garvin & Co., of 139-143 Centre street, New York. In addition to the matter usually found in such catalogues there is considerable information on other subjects, such as calculating speed of pulleys, weights of metals per cubic foot, &c.

MESSRS. D. A. TOMPKINS & Co., of Charlotte, N. C., have been incorporated as the "D. A. Tompkins Co." Capital stock \$100,000. The business of this corporation will be the same as that of the old firm, viz.: consulting and contracting engineers, and dealers in machinery.

THE Roller Chain Belting Co., of Columbus, Ohio, report their sales on the increase, having at the present time plenty to do, and with their facilities for manufacturing are able to ship promptly.

THE Sykes Iron Roofing Co., of Niles, O., write us as follows: As regards business will say we have at present two large contracts for corrugated iron which will keep us pushed for some time. One is the Oil City Tube Co.'s building, Oil City, Pa. Building is 307 feet by 200 feet, to be roofed and sided with No. 20 iron; also good demand for our Sykes Patent Cap Roofing.

D. W. K. PEACOCK, of Cartersville, Ga., is a real estate agent and makes mineral property a specialty. He is, we understand, thoroughly posted as to the mineral resources and properties in his section, and can give full information to any desiring to invest in that region.

List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date March 29, 1887. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Abell, J. J., and C. B. Gifford, Colesburg, Ky.	Primary electric clock	360,078
Brommer, G. J., and E. D. Bradshaw, Little Rock, Ark.	Barrel-cover	360,201
Brown, T. J., Bedias, Texas.	Cultivator	360,274
Browne, W. G., Atlanta, Ga.	Automatic cut-off for water-pipes, (4 patents)	360,085
Cheek, D. L., Gainesville, Ga.	Vehicle-shaft	360,204
Coghill, J. C., and C. H. Unselt, Paducah, Ky.	Combined fertilizer-dropper and hill-former for tobacco-plants	360,205
Colomb, G. A., Convent, La.	Artificial tooth-crown	360,205
Cooke, W. A., Gaithersburg, Md.	Artificial bait for fishing	360,339
Cosby, J. M., Elberton, Ga.	Hand-power attachment for sewing-machines	360,376
Crowder, W. A., and H. M. Sutton, Dallas, Texas.	Electric-arc lamp	360,377
Tanos, Marie, New Iberia, La.	Cultivator	360,281
Ferguson, G. J., Greenville, Texas.	Continuous recording-seal and door-fastener	360,285
Ferriotti, C. L., Armour, Texas.	Combined cotton-chopper and cultivator	360,214
Haines, S. A., Guide, Texas.	Ant-trap	360,293
Hambleton, F. H., Baltimore, Md.	Registering apparatus	360,291
Harvey, W. B., Memphis, Tenn.	Secondary electric clock	360,092
Hinton, W. W., and J. H. Covington, Ky.	Counter show-case	360,153
Howell, G. W., Covington, Ky.	Wheel	360,156
Jurgens, N. C., Clifton, Texas.	Egg-preserving compound	360,350
Kirven, P. E., Wortham, Texas.	Cultivator	360,304
Lambdin, Carvoso, Wilmington, N. C.	Electric signal system	360,085
Lyon, J. A., Clarksville, Tenn.	Gas-regulator	360,389
McGehee, A. G., Montgomery, Ala.	Cotton-condenser	360,236
McLeod, Alex., Somerset, Ky.	Car-replacer	360,320
Meikle, Thos., Louisville, Ky.	Colter-coupler plate	360,034
Mitchell, W. H., Horse Cave, Ky.	Clearing attachment for grain-drills	360,322
Phillips, W. W., Rawhide, Ala.	Horse-detacher	360,324
Porter, E. A., Bowling Green, Ky.	Corn husking and crushing machine, (2 patents)	360,044
Roberts, E. H., Cub Hill, Md.	Remedy for hog-cholera	360,363
Thompson, M. Y., Arkadelphia, Ark.	Rail-way-tie	360,397
Underwood, S. G., Sr., Milton, Ky.	Fire-escape	360,333
Vanduzen, E. W., Newport, Ky.	Grate-bar, (2 patents)	360,067
Waddell, A. P., Union City, Tenn.	Harness-saddle	360,256
Watson, J. P., Leesburg, Texas.	Motor	360,184
Wilkinson, J. R., Atlanta, Ga.	Weighing-scale	360,073

A. P. THAYER,
Solicitor of U. S. and Foreign
PATENTS,
No. 86 Astor House, New York.

Experience of Over 20 Years.

PROTECT YOUR INTERESTS!

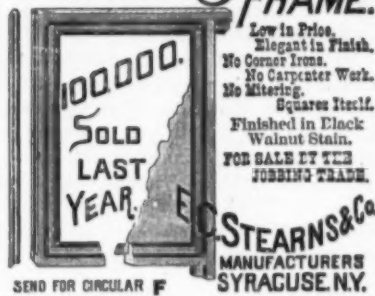
BUY THE IMPROVED

"STANDARD"

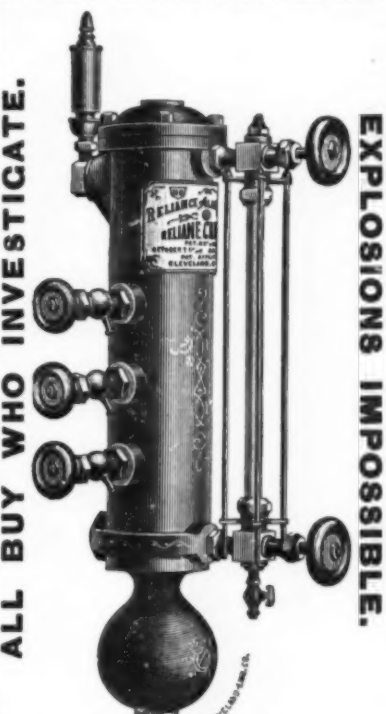
WATCHMAN'S CLOCK.

Recommended by Fire Insurance Companies, to control Watchmen in Factories, Warehouses, etc., etc. The only reliable instrument of its kind and warranted superior to all others. Will be sent on trial. Price for Twelve Stations Complete, \$50. It will pay you to send for circular before ordering elsewhere. **O. E. HAUSBURG,** Sole Agent, 71 Nassau St., New York. N. B.—All kinds of Watchman's Clocks repaired and warranted to give satisfaction.

STUART'S SCREEN WINDOW FRAME.



RELIANCE ALARM GAUGES



AGENTS WANTED EVERYWHERE.

Illustrated Price-List Free.

RELIANCE GAUGE COMPANY,

Office, Argyle Building, CLEVELAND, OHIO.

For Sale Cheap
ON LONG TIME.

- 1 32 in. x 32 in. x 9 ft. heavy, second-hand planer.
- 1 Davis Keyseator, $\frac{1}{4}$ in. to 1 in., Keyseators, Bargain.
- 3 Steam Pumps, second-hand. All sizes.
- 1 Chasing Lathe, 17 in. x 5 ft. Bed. New Haven.
- 1 No. 4 Sturtevant Blower. Good as new.
- 1 Second-hand Corn Grinding Mill.
- 1 10 Horse Power and 1 12 Horse Power Portable Engine and Boiler on wheels, second-hand.
- Vertical Engines, 1 to 20 Horse Power.
- Horizontal " 6 to 90 "
- Vertical and Horizontal Boilers, either iron or steel—any horse power desired.
- Round and Square Tanks—all sizes.
- Saw Mills and Planing Mill Machinery and Machine Shop Tools.

Also,
Shafting, Pulleys, Hangers, Belting, Belt Fasteners, Lace Leather, Belt Grease, Journal Grease, Pipe, Tub's, Fittings, Valves, Pipe Tools, Files, Bolts, Set and Cap Screws, Wrought Rim Pulleys, Sheet Gum and Packing, all kinds. Boiler Scale Preventive, Gardner Governors $\frac{1}{4}$ in. to 4 in. in stock.
Headquarters for Gas Engines.
One Sturtevant Blower, Monogram Pattern.

WM. C. CODD,

2010 and 2012 Aliceanna Street,
BALTIMORE, MD.

PORTLAND CEMENT.

German and English Brands of
Best Quality.

Send for tests and all particulars to

ERSKINE W. FISHER

WELLES BUILDING, No. 18 Broadway, • • NEW YORK.

To Build Three Large Cotton Mills, Woolen Mill, &c.

ATHENS, TENN., April 4, 1887.

Editor Manufacturers' Record:

The Athens Mining & Manufacturing Company, of this place, was organized this day. Composed of the following gentlemen as officers: Col. R. L. Bright, president; A. C. Robinson, vice-president; Jno. L. Young, secretary; R. J. Fisher, treasurer and general manager. This is an incorporated company with a capital of \$1,000,000. Have secured one thousand acres of valuable land and will erect \$500,000 worth of manufacturing on the land. Work to commence at once. Factories to consist as follows: Three large cotton mills, one large woolen mill, water works, \$40,000 hotel, and a \$5,000 graded public school, &c., &c. This company is composed of some of the most prominent and wealthy men of the country.

J. L. YOUNG.

To Build a Refrigerator.

HOT SPRINGS, ARK., April 2, 1887.

Editor Manufacturers' Record:

The Hot Springs Automatic Refrigerating Co. was incorporated March 23, 1887. The purposes are the carrying on of a general refrigerating business in all its branches; the manufacture, sale and lease of ammonia and all other materials and agencies used in connection with processes of refrigeration. Capital stock \$60,000. J. D. Kimbell is president, and N. J. Woosley, secretary. Will commence plant and buildings in the next 60 days, and have made contracts for machinery.

J. D. KIMBELL.

To Build a Hotel.

NICHOLASVILLE, KY., April 4, 1887.

Editor Manufacturers' Record:

A subscription of \$22,000 has been raised for the purpose of erecting a hotel and paying for the land on which it is to be built. The company will be incorporated forthwith for that purpose.

J. S. BRONAUGH.

To Build Large Pottery Works.

WHEELING, W. VA., April 4, 1887.

Editor Manufacturers' Record:

The stock for the La Belle Pottery Co., \$80,000, has all been subscribed. The ground, 300x100 feet, bought. The building will be the full size of the ground and five stories high, with eight kilns and eight decorating kilns. It will be managed by the Wheeling Pottery Co.

GEO. K. WHEAT.

SALEM, VA., April 1, 1887.

Editor Manufacturers' Record:

The sale of 2,800 acres of mineral land in Roanoke county, near Salem, on the Norfolk & Western Railroad, was made to Mr. Tower, of Poughkeepsie, N. Y., who contemplates erecting a large furnace at Roanoke City. Two corps of engineers are now locating line for Virginia Western Railroad, which is contemplated being built from Buchanan, Va., via Catawba creek, to Tennessee line, to connect with Tennessee Midland, which gives through connection from Baltimore to Memphis.

C.

ATLANTA, GA., April 4, 1887.

Editor Manufacturers' Record:

I have taken an interest in a saw mill in Chattanooga. As soon as our company arrange all minor details we will, no doubt, add more machinery.

W. S. BELL.

DALTON, GA., April 1, 1887.

Mr. O. H. Pennock, representing Pennsylvania capital, has purchased the old National Hotel block, and states his purpose to tear down and build and equip a modern hotel. A company has also secured Rocky Hall mineral springs, 22 in number, 5 miles of Dalton, on W. & A. Railroad, and announce purpose of improving.

H. A. WRENCH.

Large Cotton Mills to be Re-built—Machinery Wanted.

WEST POINT, GA., April 1, 1887.

Editor Manufacturers' Record:

Our handsome factory building, superintendent's office, supply rooms, slasher rooms, and the Magnolia mills building, with contents, were all destroyed by fire Monday night. The company had in operation 188 duck looms, and the machinery was all new and modern. They had a large trade, and their brands were very popular. They will rebuild at once, and equip two hundred looms for duck. Will be in the market for all the machinery necessary, except the pickers, which were not burned.

WEST POINT MFG. CO.

A Creamery.

ARCOLA, VA., April 4, 1887.

Editor Manufacturers' Record:

Ground has been broken for a creamery at the Greenspring, in Loudon county, by L. F. Palmer, I. F. Ryan and W. L. Palmer. G. Gardner and E. McFarland are the contractors. The capacity is about 5,000 pounds milk daily. A steam saw and grist mill is also talked of.

A. C. W.

KNOXVILLE, TENN., March 31, 1887.

Editor Manufacturers' Record:

Our purpose is to build a fine modern hotel here to cost (estimated) \$250,000, and for that purpose options have been secured on the old Court-house Square, a beautiful site overlooking the Tennessee river. A charter has been applied for under the name of the Knoxville Hotel Co., and subscriptions will be opened at once.

F. J. HOYLE.

To Mine 1,000 Tons of Coal Daily.

JELICO, TENN., April 2, 1887.

Editor Manufacturers' Record:

The Proctor Coal Co. will build the coming season 3½ miles track, standard gauge, to connect their mine in the Jellico mountain with the two railroads at this place, the E. T. V. & G. and L. & N. This company will equip their mine for an output of 1,000 tons daily. The property embraces 5,000 acres of the heart of the Jellico coal field, and is located in the center of the field, covering a vein about 60 inches thick or about 7,500 tons per acre, or a total of 37,500,000 tons. This is the only coal found either North or South that can go to the Ohio River and compete in prices with the Pittsburgh, Pa., coals.

B. R. HUTCHERAPT, Genl. Man.

TRIFORD, VA., March 29, 1887.

Editor Manufacturers' Record:

Marks & Mathews are developing a vein of hematite ore on my land; have found several large veins. Sent a sample car-load to the Lynchburg furnace, which proved to be 50 per cent. ore. They have gone to work to fill orders. The mines are 1¼ miles from Loch Laird depot, the junction of the Richmond & Alleghany and Shenandoah Valley Railroads.

JOHN E. LAIRD.

SHENANDOAH CO., VA., April 2, 1887.

Editor Manufacturers' Record:

It is our purpose to change my present plant to a ferro manganese furnace. I put thirty hands at work immediately to fully develop the manganese, which extends upwards of three miles on my property and can be traced beyond. The iron boom is reaching Virginia.

FRANK KING.

CHARLOTTE, N. C., March 30, 1887.

Editor Manufacturers' Record:

We have sold and have just started at Mount Mourne, N. C., for Harris & Co., a saw mill plant. Engine made by Cleveland & Hardwick.

BREM & McDOWELL.

Rails and Cars for Street Railroad Wanted.

DALTON, GA., April 2, 1887.

Editor Manufacturers' Record:

The Dalton Street Railway Co. have obtained the necessary franchise from the city and selected a board of directors and instructed them to build the road. Bids for furnishing iron, cars, &c., invited.

T. R. JONES, Sec. of Board.

Mining Machinery.

THOMASVILLE, N. C., March 29, 1887.

Editor Manufacturers' Record:

I have received and sent to the Appalachian Gold Mine, some 200 tons of machinery for the Excelsior Iron Works, Chicago, Ill., who has the contract to equip the mine. The mine is about 35 miles from this point, in Montgomery county. Near the mine is the Russell Gold Mine Co. that is getting a lot of machinery from Chicago.

H. J. HARRISS.

SHREVEPORT, LA., April 2, 1887.

Editor Manufacturers' Record:

A company has just been organized here, styled the Shreveport Opera House Company, with capital stock of \$40,000, for the purpose of building at once a first-class theatre with seating capacity of 1,000 to 1,200. Ground has been purchased, 80x150 feet, and the building will be commenced as soon as a plan is decided upon. We are in correspondence with several first-class theatrical architects and hope to begin operations soon.

SAM. N. FORD.

TUSKALOOSA, ALA., March 22, 1887.

Editor Manufacturers' Record:

Messrs. Bruce & Morgan, architects, of Atlanta, Ga., have been engaged to prepare plans for the new Merchants' Bank building. For particulars address

GEO. A. SEARCY, Pres.

To Rebuild Saw Mill.

FRANKFORT, KY., March 30, 1887.

Editor Manufacturers' Record:

I will let the contract for the erection of my frame saw mill building in a few days. Will put in a double circular. Capacity 40 to 60 M ft. daily. I will place my orders for machinery, belting, &c., in ten or fifteen days. Size of building 45x80. Cost \$12,000.

W. L. PENCE.

Will Erect a Cotton Compress.

FLORENCE, ALA., March 31, 1887.

Editor Manufacturers' Record:

A compress company has been organized, with myself as president. Stock all taken and contract for compress to be in running order by October 1, 1887.

W. P. CAMPBELL.

Will Build a 40-Ton Furnace.

LYNCHBURG, VA., March 29, 1887.

Editor Manufacturers' Record:

The Virginia Nail & Iron Works Co. will build a 40-ton blast furnace in connection with their nail works, with further improvements in contemplation.

J. P. WILLIAMS, Sect'y & Treas.

Rebuilding Saw Mill.

RUSK, TEXAS, April 2, 1887.

Editor Manufacturers' Record:

We are rebuilding our saw mill. We are running a 30 H. P. Engine and saw mill, a grist mill and gin.

ROBT. PRYOR & SONS.

FREELAND, MD., April 2, 1887.

Editor Manufacturers' Record:

We have built an addition to our paper mill, that is, to the machine room, 20x26 feet, and in the near future we are going to reset our paper machine and rebuild it and put in one new heating engine and some other repairs.

A. SHAVER & SON.

Building a Planing Mill.

TYLER, TEXAS, March 29, 1887.

Editor Manufacturers' Record:

We are now building a planing mill and drying house. Will use a 80 H. P. engine and have a capacity of 60 M feet worked lumber daily.

TYLER LUMBER CO.

CHARLESTON, S. C., March 30, 1887.

Editor Manufacturers' Record:

The South Carolina Railway Co. is building a new bridge across the Savannah river at Augusta. It is a wooden bridge, Howe truss, 910 feet long, single track, D. M. Renno, builder, under the supervision of Engineer de Caradeuc, of South Carolina Railway Co., to cost about \$45,000. The same company have also just completed extensive improvements on their wharves on Cooper river, in Charleston, with additional tracks along the river edge, and ships of any size can now load or unload directly from or to the cars.

A. DE CARADEUC, Engineer.

To Build a Rolling Mill.

BIRMINGHAM, ALA., March 31, 1887.

Editor Manufacturers' Record:

I cannot give size of mill at present. Its capacity will be about 100 tons of finished iron per day. Hope to begin work about May 1 constructing buildings, &c.

ENTERPRISE ROLLING MILL CO.

O. WIESER.

Enlarging Factory.

DURHAM, N. C., April 2, 1887.

Editor Manufacturers' Record:

I have bought the Wilkerson, Christian & Co. sash and blind factory, and am enlarging them. Will add several more machines, and intend soon to charter a stock company, making it both a wood and iron working company, with ample facilities.

J. W. BLACKWELL.

Doubling Capacity Cotton Mill.

PACOLET, S. C., March 29, 1887.

Editor Manufacturers' Record:

Have commenced work. Will double present capacity and make same class of goods as we are now making.

PACOLET MFG. CO.

Will Erect Electric Light Plant.

WINSTON, N. C., March 30, 1887.

Editor Manufacturers' Record:

There was organized at this place this evening the Winston Electric Light Company, with D. H. Starbuck as president. Ample capital subscribed to commence work at once. The town will be lighted by May 15.

EDITOR TWIN CITY DAILY.

Rebuilding Planing Mill.

OBION, TENN., March 31, 1887.

Editor Manufacturers' Record:

We will rebuild our planing mill at once; in fact, have started to put up our building already. Our Mr. L. V. Boyle is now in Chicago, where he will purchase the machinery, which will be the latest improved. We are also putting up a Stearns No. 1 steam feed saw mill.

L. V. BOYLE & CO.

A Rolling Mill and Furnace to be Built.

ROME, GA., April 2, 1887.

Editor Manufacturers' Record:

The charters for the Rome Rolling Mill Co. and the Rome Furnace Co. will be secured as soon as legal process can be completed.

J. L. BASS, Secretary.

Rebuilding Saw Mill.

ELLZEY, FLA., March 31, 1887.

Editor Manufacturers' Record:

My saw mill was burned March 18; loss \$3,300, with no insurance. I am rebuilding with increased power for cutting white oak, staves, in addition to sawing and expect to be running in 90 days.

G. H. SULLIVAN.

Will Rebuild Distillery.

DELAPLANE, VA., April 1, 1887.

Editor Manufacturers' Record:

We will rebuild our distillery.

BAYLY & CO.

Contracted to Build Bridge.

ATLANTA, GA., April 1, 1887.

Editor Manufacturers' Record:

We have taken contract for the bridge at Rome, Ga. It consists of one draw 185 feet, and two fixed spans of 71 feet each, all iron. Contract price \$17,000.

ATLANTA BRIDGE & AXLE CO.

W. B. MILES, Manager.

To Manufacture Hosiery.

FREDERICK, MD., March 31, 1887.

Editor Manufacturers' Record:

We have formed a stock company for the purpose of manufacturing hosiery principally, but may branch out into other articles in the same line. The name of the company is the Frederick Seamless Hosiery Company. We propose to employ when in running order not less than fifty persons.

GEO. H. ZIMMERMAN,
Sec'y and Treas.**Enlarging Woolen Mills.**

LOUISVILLE, KY., March 30, 1887.

Editor Manufacturers' Record:

Our contracts are now out for enlargement of our mill 75x65 feet to accommodate 70 additional looms on doeskin jeans, making our total number 370 looms, the largest in the United States on better classes of jeans. Strong efforts are making to establish a large cotton mill here; subscribers to stock are plentiful, provided good practical men can be secured. Correspondence is solicited. Real estate is "booming" here with advances of 25 to 35 per cent., and still prices are lower than in any similar sized city in the country.

THE LOUISVILLE-KENTUCKY
WOOLEN MILLS.

CLAYTON, GA., March 27, 1887.

Editor Manufacturers' Record:

We have started a new grist mill in Clayton; also a variety of other machinery suitable to manufacture wagons, buggies, doors, sash and blinds, &c.

DONALDSON, FREEMAN & Co.

Will Add New Machinery.

DALTON, GA., March 30, 1887.

Editor Manufacturers' Record:

Will increase capacity soon from 6,000 yards daily to 8,000 or 9,000 yards. Mill new; but stock now worth \$150. Expect to fill building to utmost capacity. Have not fully decided on the number of spindles, cards, &c., it will take to even us up. There is strong talk of building a cotton check mill in this place soon.

CROWN COTTON MILLS,
G. W. HAMILTON, Sec. and Treas.**Contracted for Water Works.**

GOLDSBORO, N. C., March 31, 1887.

Editor Manufacturers' Record:

Water works contract awarded to Moffet, Hodgkins & Clark, Watertown, N. Y. Work to be commenced in 30 days. Stand pipe to be used. Capacity of not less than 200,000 gallons.

F. H. BAIN.

Erecting a Saw and Planing Mill.

LITTLE ROCK, ARK., March 30, 1887.

Editor Manufacturers' Record:

I am erecting a saw and planing mill at cost of \$17,000

H. A. BOWMAN.

ELBERTON, GA., April 4, 1887.

Editor Manufacturers' Record:

There will be built here at once a factory for the manufacture of the Corby sewing machine attachments. Thos. M. Swift is general manager, and W. M. Wilcox and James M. Corby, special partners.

THOS. M. SWIFT.

A Gas and Oil Company.

DAYTON, TENN., March 31, 1887.

Editor Manufacturers' Record:

Our company organized for the purpose of boring for natural gas and oil, to be known as the Dayton Gas & Oil Co.

M. A. FARRELL.

FLORENCE LAND, MINING & MANUFACTURING CO.

Florence, Alabama.

Great Sale of Town Lots

AT AUCTION!

APRIL 26, 1887, and CONTINUING FIVE DAYS.

4,000 Acres of Beautiful Building Lots to be Sold in the City of Florence, which now has 2,500 inhabitants.

30,000 Acres Fine Mineral Lands. Two 100-ton Blast Furnaces now in course of erection.

Water Works, Electric Light and Street Railroad Companies formed and stock all taken and to commence work at once.

TERMS OF SALE—One-fourth Cash, balance in 1, 2 and 3 years, with 6 per cent. interest.

FLORENCE

* FOR BEAUTY, HEALTH AND CLIMATE UNSURPASSED! *

Is situated on North Bank of the beautiful Tennessee River, and 160 Feet above high water. Streets 100 to 150 feet wide and many finely PAVED. Fine Schools and Churches, and is only six miles from the famous BAILEY SPRINGS.

PAMPHLETS, GIVING FULL HISTORY OF CITY AND SURROUNDING COUNTRY, WITH BEAUTIFUL MAPS,
SENT FREE ON APPLICATION.

H. C. WOOD, Sec'y. W. P. CAMPBELL, Treas. W. B. WOOD, Prest. A. W. WILLS, Vice-Prest.

DIRECTORS:

Hon. W. B. WOOD, Florence, Ala. Dr. J. C. CONNER, Florence, Ala. Col. W. C. SHERROD, Florence, Ala. W. E. BLAIR, Esq., Florence, Ala.
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PITTSBURGH LOCOMOTIVE AND CAR WORKS,

PITTSBURGH, PA., Manufacturers of

Locomotive Engines for Broad or Narrow Gauge Roads,

From standard designs or according to specifications, to suit purchasers.

TANKS, LOCOMOTIVES OR STATIONARY BOILERS FURNISHED AT SHORT NOTICE.

A. STEWART, Pres't.

D. A. WIGHTMAN, Supt.

WILSON MILLER, Sec'y and Treas.



BUFFALO HAMMER CO., Buffalo, N. Y., U. S. A., Manufacturers of a full line of

Solid Cast Steel Hammers, Sledges, Mauls,



RAILROAD TRACK TOOLS. &c.

Every Hammer or Tool having our name is fully warranted. Catalogues and discounts sent on application.

BAGNALL & LOUD BLOCK CO. BOSTON, MASS.

Largest Manufacturers of Tackle Blocks in the World.

Manufacturers of the Latest Improved Self-Adjusting ROLLER BUSHED and GENUINE METALINE BUSHED and Iron Bushed Rope and Iron Strapped

TACKLE BLOCKS.

CLASP OPEN.



Improved Self-Adjusting Roller Bushed Iron Sheave.



Improved Harcourt Patent Block.



Improved Self-Locking Link Snatch Block.

Send for the Celebrated
STAR BRAND.Send for Catalogue
No. 5.

PEERLESS.



The Gooch "Peerless"

And "Giant" Freezers.

OUR FREEZERS STAND UNRIVALED.

THE BEST GOODS EVER MADE.

Superior in Every Particular.

No other Freezers ever had such a sale. Send for Price-List and Discounts.

PRICES REDUCED FOR 1887!

MANUFACTURED BY THE

GOOCH FREEZER CO.

28, 30, 32, 34, E. Ninth Street,

CINCINNATI, O.



WM. D. WINES,

Contractor for

IRON BUILDINGS AND IRON ROOFS

Corrugated and Galvanized

IRON WORKS,

44 Centre Street,

Established 1867.

NEW YORK CITY.

SILVER & DEMING MFG. CO.

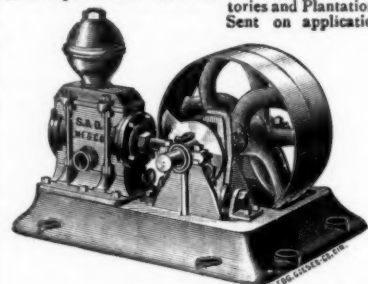
Salem, Ohio,

MANUFACTURERS OF

Cistern, Well and Force Pumps,

Iron and Brass Cylinders, Wind Mill Pump and Supplies, Hand and Power Rotary Pumps, Boiler Feed Pumps, Hydraulic Rams, Garden Engines, &c.

Well Drillers' and Well Drivers' Supplies. Catalogue of Pumps for Farm and Domestic use, Mines, Factories and Plantations. Sent on application.



Triumph Double Acting Force Pump—For Power.

Cleveland Machine Co.

SUPERIOR
OLID
STEEL
HEARS.FORGED
FROM

BAR STEEL

AND
TEMPERED
IN

OIL.

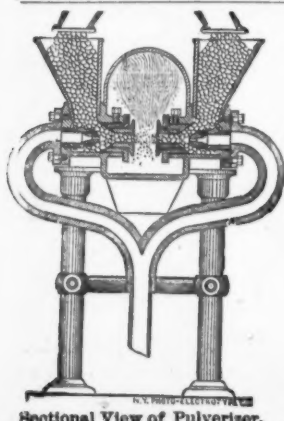
WE CHALLENGE COMPETITION FOR

Cutting and Wearing Qualities.

THE FINEST. AS GOOD AS THE BEST.

We Expect to Lead, and you cannot afford to lose a chance of keeping posted on the IMPROVEMENTS of the age. Get our prices, and then try a sample order. Your customers will compel you to order again. Address, with name of paper where you saw this,

The CLEVELAND MACHINE CO., 143 to 161 Leonard St., CLEVELAND, O.



Sectional View of Pulverizer.

PNEUMATIC PULVERIZER.

The principle of pulverization consists in the employment of

TWO POWERFUL OPPOSING CURRENTS

of dry super-heated steam, so arranged that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized to any degree of fineness desired. The high temperature of the super-heated steam currents employed, through which every minute particle of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon Sulphurets and ores containing rusty Gold. The light weight and simplicity of construction of the Pulverizer, the extremely small and inexpensive wearing parts are the WONDER and SURPRISE of all who witness its operation. The Company are prepared to furnish complete plants for pulverizing

10 to 200 Tons Per Day,

including a Sectional Steam Boiler supplying all the power required.

PNEUMATIC PULVERIZER COMPANY,

L. F. HOLMAN, Pres't.

F. A. LUCKENBACH, Supt.

2 and 4 Stone Street, New York.

WRITE FOR PARTICULARS.

ICE MACHINE.

The advertiser, owning a first-class Ice Machine, desires a party to take an interest in same and erect it in any good Southern town. Party taking interest to manage the business, or if stock company is organized, owner will sell and take stock.

Address P. O. Box 249,

KANSAS CITY, MO.

AUTOMATIC CUT OFF ENGINES

Embodiment of a new system of Absolute Regulation against a change of load and boiler pressure. The most perfect governing ever obtained. Send for circular. We guarantee better regulation than is possible for any other engine to give.

BALL ENGINE CO., ERIE, PA.

OFFICE MANUFACTURERS' RECORD, }
BALTIMORE, April 6, 1887. }

Baltimore Charcoal Wheel Iron (all			
Baltimore ore).....	\$28	00	99 00
Virginia C. B. Charcoal Wheel Iron.....	27	00	99 00
Anthracite, No. 1.....	21	00	23 00
" " " " " " " " " " " " " " " "	19	00	21 00
" " " " " " " " " " " " " " " "	17	00	19 00
Mottled and White.....	14	00	15 00
Old Rails.....	23	50	24 50
Old Steel Rails.....	22	50	23 50
No. 1 Wrought Scrap.....	23	00	24 00
Old Car Wheels.....	17	50	18 50

We are on the eve, according to every appearance, of a revival in demand for all kinds of iron and steel. For two or three weeks past the least possible business has been done. During this month some orders will be placed, not only for crude iron, but for very large quantities of bridge work and building iron and steel, besides plate, tank, sheet, pipe and bar iron. A great deal will depend upon the developments of the next ten days. Manufacturers everywhere are inclined to hold out for the outside prices, on account of the multiplying inquiries from all quarters. The agents who have been traveling among consumers find that there is a large amount of business in hand and only moderate stocks to cover them. Buyers have been anticipating a little decline from the outside figures of early March, but the course of the trade during the past few days points rather to a strengthening than a weakening of all prices. Quotations for good brands foreign iron are \$19 to \$21.50; gray forge brings \$19 50, and inferior sells at \$18.50. Inquiries have been made during the past few days for large lots of forge in 500 and 1,000-ton lots. Bar iron is 2.20. Sheet iron sells at full card rates. Plate and

Wire is in good demand and holding its own fairly well. The manufacturers of this have been mainly engaged in shipping their more distant customers before the inter-State commerce bill should have passed into effect.

LOUISVILLE, KY., April 4, 1887.

The market for pig iron for the past week has been about the same as usual. The demand is light, the orders being small and for odd lots. Furnaces are still busy filling old orders. The fact that prices have held their own so well, considering the light buying for the past two months, is a feature of the market that looks very favorable for the future. With freight matters settled, we confidently expect many large buyers to place orders. We can report two or three sales of round lots of mill iron at full prices. There has been some buying of old rails at slight concessions from prices ruling two weeks ago. The consumption of old wheels, at present, is very large and offerings light. We renew our old quotations:

	FIG IRON.	
Southern Coke, No. 1 Foundry.....	#1	50¢28 00
" " " " " " " " " " " "	"	50¢28 00
Hanging Rock Coal, No. 1 Foundry....	#1	60¢20 50
Southern Charcoal, No. 1 Foundry....	"	60¢20 50
Silver Gray, different grades.....	"	60¢20 50
Southern Coke, No. 1 Mill, Neutral..	"	19 50¢20 00
" " " " " " " " " " " "	"	19 50¢20 00
" " " " " " " " " " " "	"	19 50¢20 00
Southern Charcoal, No. 1 Mill.....	"	50¢21 00
White and Mottled, different grades..	"	17 50¢18 50
Southern Car Wheel standard brands..	56	00¢27 00
" " other brands.....	24	00¢05 00
Hanging Rock Cold Blast.....	27	00¢28 00
" Warm ".....	23	00¢24 00

There is beyond question an improvement in inquiry and increase in number of orders booked, some sellers here having done more business in the past week than during the month previous. There has not yet begun, however, anything like a general buying movement. The furnaces feel very strong in their position, having in most cases bare furnace banks and large contracts ahead. Consumers, on the other hand, feel that the tendency of the market is in their favor, and are willing to wait. Favorable reports come from nearly all branches of manufacturing in which crude iron is employed. The machine shops in this quarter have more call for machinery than during the activity of December and January. Agricultural works are encouraged from favorable reports from the farming districts to look for a large season's business. The stove men are fairly busy. Rolling mills are all running full, and disposing of their product. Nail works are dull. Car works are overrun with orders.

CHICOPEE FALLS, Mass.

Fine Machinists' Tools and Firearms.

SEND FOR
ILLUSTRATED CATALOGUE.

Patent Combination Gauge

CRONK



Hanger Co.

ELMIRA, N. Y.

MANUFACTURERS OF THE CRONK'S PATENT

WIRE CUTTER.

Bender and Plier and Hog Ringer Combined.

Specially adapted for use on Wire Fences; also best in the world for TINNERS' use. Patent Allowed.

CAREW'S • PATENT • WIRE • CUTTER.

These goods have recently been greatly improved. They are now made throughout of

FORGED STEEL.

The advantage of this cutter is seen at a glance. The adjustable jaws are its main feature. These are made of the best tool steel, and are brought to a keen cutting edge before being tempered. The cutting quality is unsurpassed. Whenever they become dulled by use, they can easily be removed, by driving from the end showing price-mark, ground, and as easily replaced. This may be repeated as often as expedient; or they can be replaced by duplicate jaws, thus obviating the necessity of purchasing new cutters. **Five sizes 6, 8, 10, 12 and 14 inch.** If your merchant does not keep them, address

M. W. ROBINSON, Sole Agent, 79 Chambers St., N. Y.



THE FRED. J. MEYERS MFG. CO.
 COVINGTON, KY., Manufacturers of
WIRE GOODS OF ALL KINDS,
 Wrought-iron Fencing, Cresting and Hardware Specialties.
 Send for Illustrated Catalogue and Price List.

Conductors' Punch. Flower Stand. Wrought-iron Fence. Chair. Revolving Punch. Window Guard. Sand and Gravel Riddle. Wire Counter Railing. Mocking Bird Cage.

Wm. Chisholm & Sons

MANUFACTURERS OF

SOLID CAST STEEL

Shovels, Spades,

SCOOPS,

AND COAL SHOVELS

Cleveland, Ohio.

These goods are the acknowledged standard wherever there is hard work to be done, and are recommended for RAILROAD, MINING, FURNACE and CONTRACTORS' USE IN GENERAL.

—Send for Catalogue.—



Covert

Manuf'g Company

WEST TROY, N. Y.

Manufacturers of COVERT'S Celebrated Harness Snaps, Swivel Snaps, Open Eye Bit and Chain Snaps, Snap and Thimble for Horse and Cattle Ties; ROPE GOODS, consisting of Web and Rope, Halters, Rope Horse and Cattle Ties, Web Horse Ties, Halter Leads, Driving Reins, Weight Cords, Hammock Ropes, Hitching Cords, Lariat Tethers and Picket Pins.

Also, Leather Horse Ties, Etc. Breast Chains, Heel Chains, Chain Cow Ties, Halter Chains, Martingale Chains, Rein Chains, Post Chains, Butt Chains, Back or Cart Chains, Log Chains, Stake Chains, Trace Chains. Also, STUD, CABLE AND COIL CHAIN. CHAINS OF ALL KINDS MADE FROM SAMPLE OR DRAWING.

PATENT ADJUSTABLE SOLDERING IRONS.

Send for Illustrated Catalogue and Price-List

TREVOR & CO.

Lockport, N. Y.

MANUFACTURE

HEADING SHINGLE AND STAVE Machinery

Also LATHES,
And SPECIAL MACHINERY

For Turning Handles and all other Turned Articles of Wood.

If you want Shingle, Heading and Stave Machinery write for Catalogue A.
If you wish Handle Machinery ask for Catalogue B.

We solicit correspondence, and will give it prompt attention.

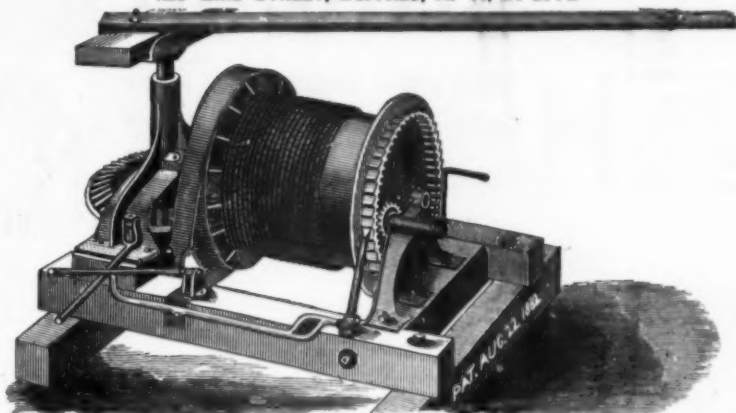
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To Secure **SOUTHERN TRADE**
ADVERTISE IN THE
MANUFACTURERS' RECORD.

THE CONTRACTORS' PLANT MANFG. CO.

129 ERIE STREET, BUFFALO, N. Y., U. S. A.



The illustration represents a Horse-Power Hoisting Winch. It is designed for mining purposes or raising coal or water out of a shaft. It will raise a bucket or weight weighing seven hundred pounds seventy-five feet per minute. The machine is made entirely of iron and steel excepting the silts, and is not affected by dry or wet climates. The hoisting drum is under complete control of the man at the shaft, landing the bucket by operating the levers at hand, and by which means the drum can be thrown in and out of gear at will when the horse is in motion, or the bucket lowered by the brakes as safely and conveniently as by a steam power hoist. No clutches to throw out or in gear. The drum will carry 500 feet or more of $\frac{1}{4}$ inch steel wire rope. The machine is **SMALL, LIGHT, EASILY HANDLED** and **DURABLE**, sufficiently strong to do the desired work, and so perfectly simple that it can be readily understood by any miner or person inexperienced with machinery. There is a safety attachment on the end of drum in case of an accident, the dog always being in gear when the bucket is being raised. Easily transported; can be made in sections small enough for mule-back transportation if desired.

We Also Manufacture Horse-Power Hoist for Railway Contractors, Bridge Builders and Quarrymen.

Correspondence Solicited, Illustrated Catalogue furnished on application. Mention this paper when you write.

FORSTER'S STONE AND IRON ORE VERY SIMPLE AND VERY DURABLE. BREAKER

For Mining, Blast Furnaces, Iron and Steel Works,
Railroad Ballast, and Macadam.

Patented April, 1873.

Lever moves horizontally. Can be operated with horse, mule, water or steam power. Owing to Great Gain in Leverage, we do the work of other Crushers with one third the power and one half the weight; and as we crush twice in a revolution, where other Crushers act but once, we do double the quantity. In Fine Crushing for Stamps, Burrs, or Finish-ing Mills, we can do more and Finer Work than has ever been attempted. For prices and testimonials, address



View when Ready for Work.

TOTTEN & CO. Rolling Mill and Heavy Machinery Founders, PITTSBURGH, PA.

ESTABLISHED 1873

WHITINSVILLE SPINNING RING CO.

WHITINSVILLE MASS. U.S.A.

MANUFACTURERS of SUPERIOR SPINNING AND TWISTER RINGS.

JOHN MITCHELL'S

Improved Combustion-Chamber

BOILERS,

With Feed-Water Heater and Boiler Cleaner

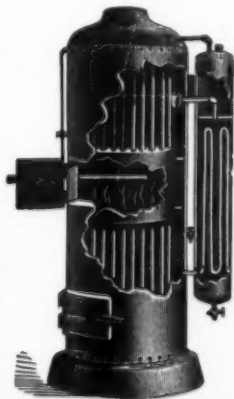
—ATTACHMENTS COMBINED—

From practical experience and actual tests, they are pronounced the most serviceable and economical Steam Boiler now in use, combining all the latest improvements in Feed-Water Heaters and Boiler Cleaners.

SIMPLE IN CONSTRUCTION AND DURABLE.

Shop Rights for Sale. Send for Circular and Price-List.

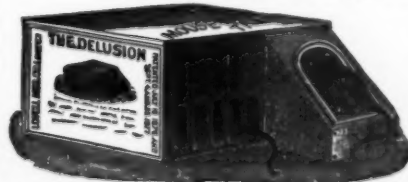
JOHN MITCHELL,
Louisville, Ky.



DELUSION MOUSE TRAP

—52,932 Sold in One Month.—

THE ONLY SUCCESSFUL
Self-Setting TRAP.



"The mouse goes in to get the bait
And shuts the door with his own weight,
And then he jumps right through a hole
And thinks he's out; but, bless his soul,
He's in a cage, somehow or other,
And sets the trap to catch another."

LOVELL MANUFACTURING CO., Limited, ERIE, PA.

Stilwell's Patent Lime Extracting HEATER AND FILTER Combined

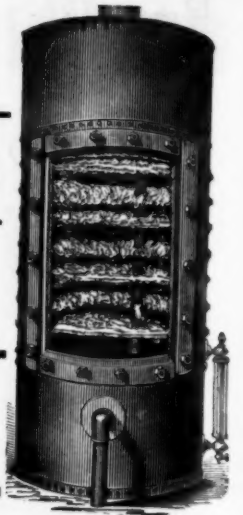
The Only Lime Extracting Heater That Will Prevent Scale in Steam Boilers.

Removing all impurities from the water before it enters the boiler.

Thoroughly Tested. Over 3,000 of Them in Daily Use.

This cut is a facsimile of the appearance of a No. 5 Heater at work on ordinary lime water, when the door was removed after the Heater had been running two weeks. Illustrated Catalogue Free.

STILWELL & BIERCE MFG. CO., DAYTON, O.



SILVER PLATED WARE.

Wm. Rogers Manf. Co.dis 50¢ to 5
Holmes, Booth & Hayden.....dis 50¢ to 5
Wallace's Steel Silver Plated.....dis 33 1/2¢ to 5
Rogers Bros 1847.....dis 50¢ to 5
C. Rogers & Bro.....dis 50¢ to 5

SCREWS.

Standard new list, Feb. 15.
Flat Head Bright.....75 ¢
Round Head Blue.....70 ¢
Round Head Bright.....70 ¢
Flat Head Brass.....70 ¢
Round Head Brass.....65 ¢
Flat Head Blue (add 5 ¢ to net).....75 ¢
Continental Flat Head.....80 ¢
Brass and Silver Capped.....40 ¢
Japanned Flat Head.....70 ¢
Coach, Patent Gimlet Point.....dis 66 1/2 ¢
Coach, Common or Lag.....dis 25 ¢
Bed.....dis 25 ¢
Machine, Flat Head, Iron.....dis 55 ¢
Machine, Round Head, Iron.....dis 50 ¢
Bench, Iron.....dis 55 ¢ to 10 ¢
Bench, Wood, Beach.....dis 25 ¢ to 10 ¢
Bench, Wood, Hickory.....dis 20 ¢ to 10 ¢
Hand, Wood.....dis 25 ¢ to 10 ¢
Hand Rail, Sargent's.....dis 60 ¢ to 10 ¢
Hand Rail, Humason, Beckley & Co.'s.....dis 40 ¢ to 10 ¢
Hand Rail, Am. Screw Co., list Jan. 1, '81.....dis 70 ¢
Jack (Wilson's).....dis 25 ¢

SCREEN FRAMES AND FIXTURES.

Standard Window Screens No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 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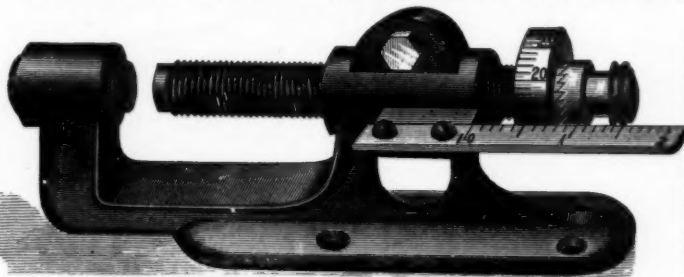
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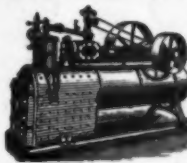
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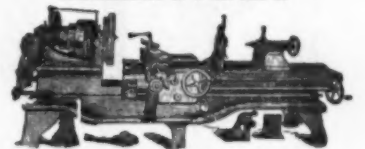
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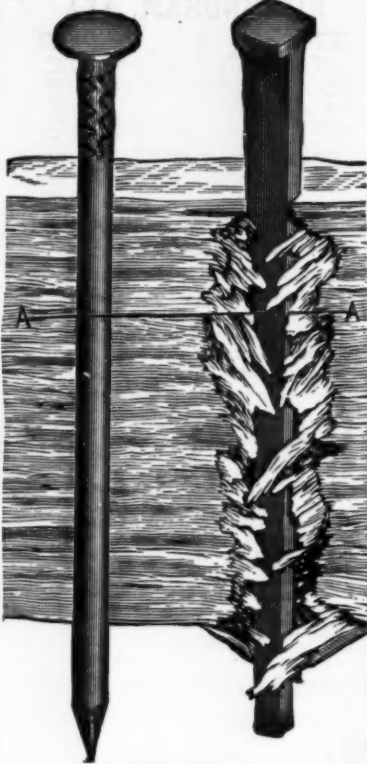
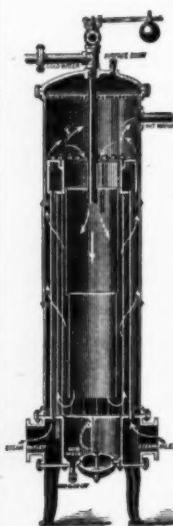
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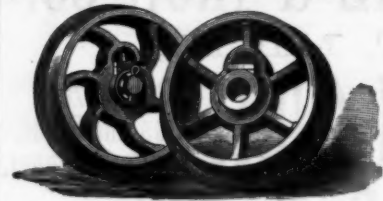
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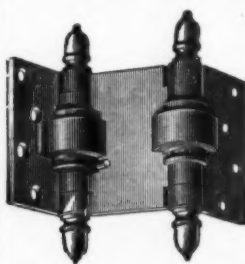
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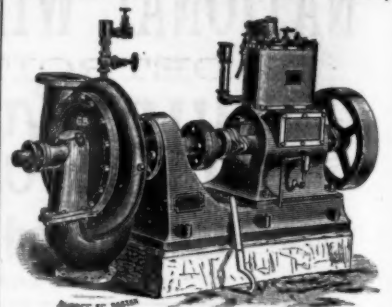
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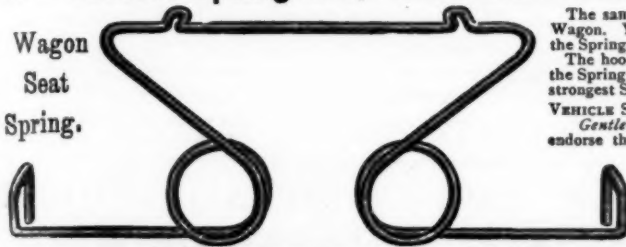
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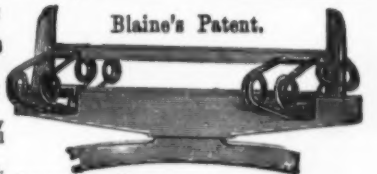
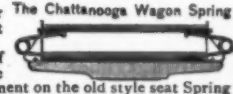
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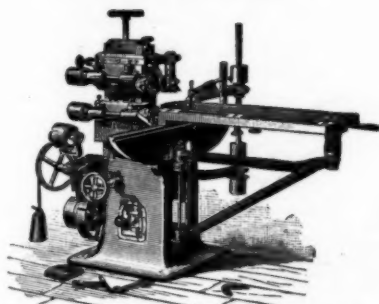
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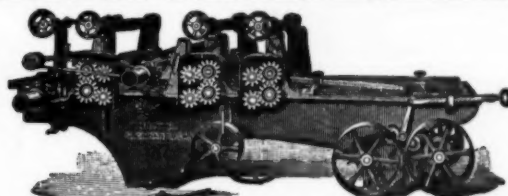
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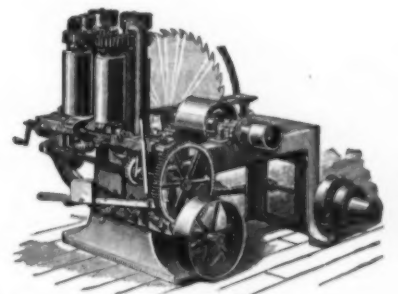
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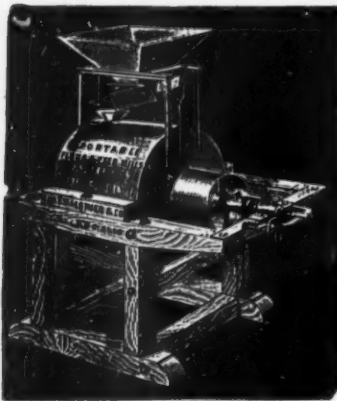
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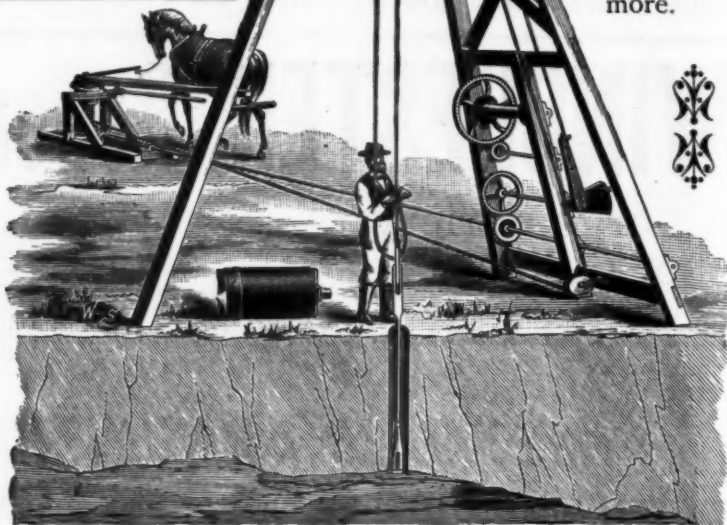
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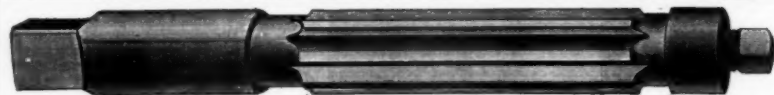
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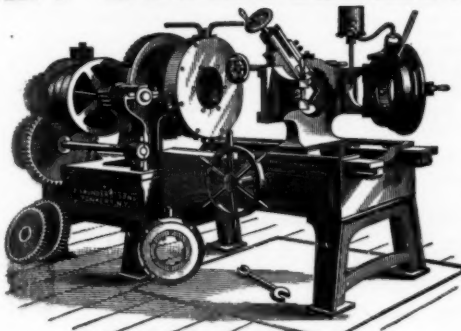
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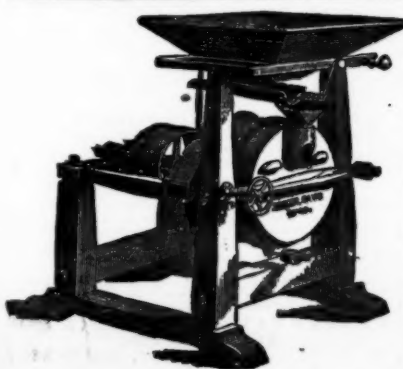
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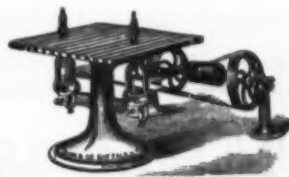
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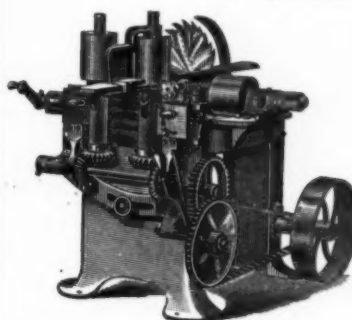
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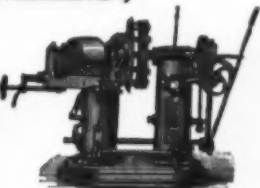


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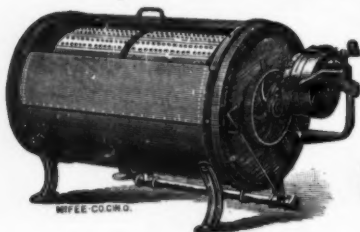
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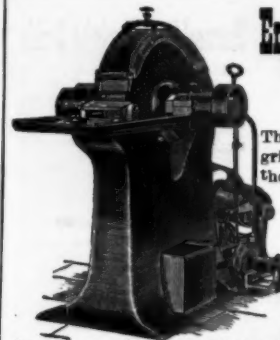
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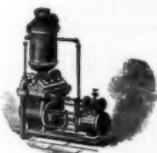
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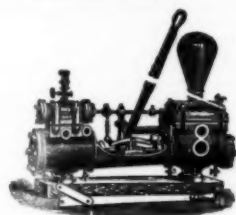
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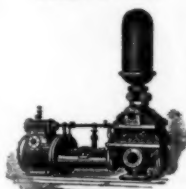
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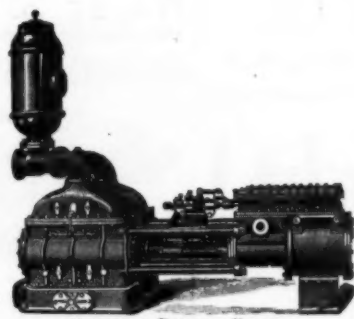
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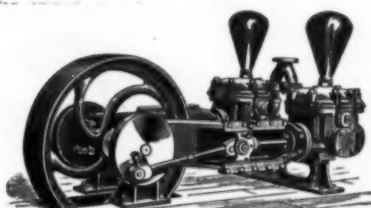
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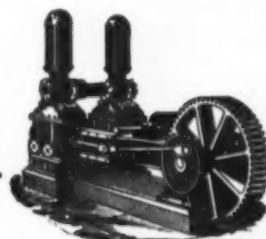
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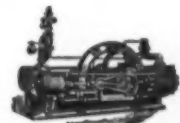
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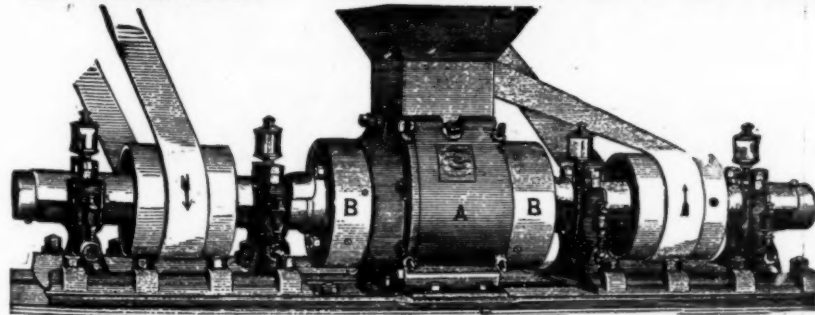
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